



# **STIC Search Report**

## **Biotech-Chem Library**

STIC Database Tracking Number: 173981

**TO: Jegatheesan Seharaseyon**  
**Location: rem/4C61/4C70**  
**Art Unit: 1647**  
**Thursday, December 15, 2005**

**Case Serial Number: 10698402**

**From: Alex Waclawiw**  
**Location: Biotech-Chem Library**  
**Rem 1A71**  
**Phone: 272-2534**

**Alexandra.waclawiw@uspto.gov**

### **Search Notes**

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STIC-Biotech/ChemLib

173981

mg

From: Seharaseyon, Jegatheesan  
Sent: Monday, December 12, 2005 1:47 PM  
To: STIC-Biotech/ChemLib  
Subject: Re:10/698402

Hi,  
Please search SEQ ID NO: 2 of 10/698402. Thanks.

Seyon  
J. Seharaseyon  
Art Unit 1647  
Remsen 4C61  
Mailbox 4C70  
Phone: (571)-272-0892  
Fax: (571)-273-0892

RECEIVED  
DEC 12 2005  
STIC

Point of Contact:

Alexandra Wacław

\*\*\*\*\*  
Searcher: \_\_\_\_\_  
Searcher Phone: \_\_\_\_\_  
Date Searcher Picked up: \_\_\_\_\_  
Date completed: \_\_\_\_\_  
Searcher Prep Time: \_\_\_\_\_  
Online Time: \_\_\_\_\_

\*\*\*\*\*  
Technical Info. Specialist  
CM1 6402 Tel 302-491-  
NA# \_\_\_\_\_ AA# \_\_\_\_\_  
S/L# \_\_\_\_\_ Oligomer: \_\_\_\_\_  
Encode/Transl: \_\_\_\_\_  
Structure #: \_\_\_\_\_ Text: \_\_\_\_\_  
Inventor: \_\_\_\_\_ Litigation: \_\_\_\_\_

\*\*\*\*\*  
Vendors and cost where applicable  
STN: \_\_\_\_\_  
DIALOG: \_\_\_\_\_  
QUESTEL/ORBIT: \_\_\_\_\_  
LEXIS/NEXIS: \_\_\_\_\_  
SEQUENCE SYSTEM: \_\_\_\_\_  
WWW/Internet: \_\_\_\_\_  
Other (Specify): \_\_\_\_\_

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GenCore version 5.1.6  
Copyright (c) 1993 - 2005 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: December 15, 2005, 12:49:43 ; Search time 47 Seconds  
(without alignments)  
332.462 Million cell updates/sec

Title: US-10-698-402-2  
Perfect score: 978  
Sequence: 1 MALPFVILMALVYLNCKSLIC.....EIMRSFSLANLOERLRKE 189

Scoring table:  
BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 572060 seqs, 82675679 residues

Total number of hits satisfying chosen parameters: 572060

Minimum DB seq length: 0  
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Issued Patents AA: \*  
1: /cgn2\_6/ptodata/1/iaa/5 COMB.pep: \*  
2: /cgn2\_6/ptodata/1/iaa/6 COMB.pep: \*  
3: /cgn2\_6/ptodata/1/iaa/H COMB.pep: \*  
4: /cgn2\_6/ptodata/1/iaa/PC/US COMB.pep: \*  
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6: /cgn2\_6/ptodata/1/iaa/backflle1.pep: \*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	978	100.0	189	2	US-09-206-935-11 Sequence 11, Appl
2	978	100.0	189	2	US-09-949-016-8554 Sequence 8554, Ap
3	971	99.3	189	1	US-08-026-758-7 Sequence 7, Appl
4	969	99.1	189	2	US-09-206-935-11 Sequence 11, Appl
5	933	95.4	189	1	US-08-026-758-19 Sequence 19, Appl
6	868	88.8	189	2	US-09-949-016-9682 Sequence 9682, Ap
7	868	88.8	189	2	US-09-949-016-9683 Sequence 9683, Ap
8	868	88.8	189	2	US-09-949-016-9684 Sequence 9684, Ap
9	855	87.4	189	1	US-08-026-758-1 Sequence 1, Appl
10	852	87.1	189	2	US-07-145-002B-24 Sequence 24, Appl
11	852	87.1	189	2	US-06-256-204C-24 Sequence 24, Appl
12	851	87.0	189	2	US-09-206-935-19 Sequence 19, Appl
13	851	87.0	189	2	US-09-206-935-19 Sequence 19, Appl
14	851	87.0	189	2	US-07-145-002B-12 Sequence 12, Appl
15	851	87.0	189	2	US-07-145-002B-16 Sequence 16, Appl
16	851	87.0	189	2	US-07-145-002B-22 Sequence 22, Appl
17	851	87.0	189	2	US-06-256-204C-12 Sequence 12, Appl
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19	851	87.0	189	2	US-06-256-204C-22 Sequence 22, Appl
20	851	87.0	189	2	US-09-919-497-73 Sequence 73, Appl
21	846	86.5	189	2	US-07-145-002B-36 Sequence 36, Appl
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25	845	86.4	189	2	US-07-145-002B-28 Sequence 28, Appl
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28	839	85.8	189	1	US-08-026-758-8 Sequence 8, Appl1
29	838	85.7	189	2	US-09-206-935-12 Sequence 12, Appl
30	838	85.7	189	2	US-09-206-935-12 Sequence 12, Appl
31	838	85.7	189	2	US-09-949-016-8553 Sequence 8553, Ap
32	832	85.1	189	2	US-09-206-935-10 Sequence 10, Appl
33	832	85.1	189	2	US-09-206-935-10 Sequence 10, Appl
34	832	85.1	189	2	US-07-145-002B-8 Sequence 8, Appl1
35	832	85.1	189	2	US-07-145-002B-20 Sequence 20, Appl
36	832	85.1	189	2	US-06-256-204C-8 Sequence 8, Appl1
37	832	85.1	189	2	US-06-256-204C-20 Sequence 20, Appl
38	831	85.0	189	1	US-08-026-758-6 Sequence 6, Appl1
39	828	84.7	189	2	US-09-206-935-8 Sequence 8, Appl1
40	828	84.7	189	2	US-09-206-935-8 Sequence 8, Appl1
41	825	84.4	189	1	US-08-026-758-3 Sequence 3, Appl1
42	824	84.3	189	2	US-09-889-035-3 Sequence 3, Appl1
43	823	84.2	189	1	US-08-026-758-11 Sequence 11, Appl
44	821	83.9	189	1	US-08-026-758-2 Sequence 2, Appl1
45	821	83.9	189	1	US-08-026-758-20 Sequence 20, Appl

ALIGNMENTS

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RESULT 1
US-09-206-935-11
; Sequence 11, Application US/09206935
; Patent No. 6299877
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Godowski, Paul
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Dong-Xiao
; TITLE OF INVENTION: NOVEL TYPE I INTERFERONS
; FILE REFERENCE: 11669.500505
; CURRENT APPLICATION NUMBER: US/09/206,935
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: 60/084,045
; EARLIER FILING DATE: 1998-05-04
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: Patentin Ver. 2.0
; SEQ ID NO 11
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-935-11
;
;
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Best Local Similarity 100.0%; Pred. No. 1.4e-104;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Db      121 ACNMQEVEGVDTPLMNVDSILTVRKYPQRTITLVTEKYSPCAMEVVRABIMSFSLSAN 180
QY      181 LOERLRKE 189
      |||||||
Db      181 LOERLRKE 189
RESULT 2
US-09-949-016-8554
; Sequence 8554, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
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TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED  
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF  
; FILE REFERENCE: C1001307  
; CURRENT APPLICATION NUMBER: US/09/949,016  
; CURRENT FILING DATE: 2000-04-14  
; PRIOR APPLICATION NUMBER: 60/241,755  
; PRIOR FILING DATE: 2000-10-20  
; PRIOR APPLICATION NUMBER: 60/237,768  
; PRIOR FILING DATE: 2000-10-03  
; PRIOR APPLICATION NUMBER: 60/231,498  
; PRIOR FILING DATE: 2000-09-08  
; NUMBER OF SEQ ID NOS: 207012  
; SOFTWARE: FASTSEQ for Windows Version 4.0  
; SEQ ID NO 8554  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Human  
US-09-949-016-8554

Query Match 100.0%; Score 978; DB 2; Length 189;  
Best Local Similarity 100.0%; Pred. No. 1,4e-104;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 181 LQERLRKE 189

QY 181 LQERLRKE 189  
DB 181 LQERLRKE 189

RESULT 3  
US-08-026-758-7  
; Sequence 7, Application US/08026758  
; Patent No. 5780021  
; GENERAL INFORMATION:  
; APPLICANT: SOBEL, DOUGLAS O.  
; TITLE OF INVENTION: A METHOD FOR TREATING AUTOIMMUNE  
; TITLE OF INVENTION: DISEASES USING ALPHA-INTERFERON AND/OR BETA-INTERFERON  
; NUMBER OF SEQUENCES: 26  
; CORRESPONDENCE ADDRESS:  
; ADDRESSEE: OBLON, SPIVAK, MCCLELLAND, MATER & NEUSTADT,  
; STREET: 1755 S. Jefferson Davis Highway, Suite 400  
; CITY: Arlington  
; STATE: Virginia  
; COUNTRY: U.S.A.  
; ZIP: 22202  
; COMPUTER READABLE FORM:  
; MEDIUM TYPE: Floppy disk  
; COMPUTER: IBM PC compatible  
; OPERATING SYSTEM: PC-DOS/MS-DOS  
; SOFTWARE: PatentIn Release #1.0, Version #1.25  
; CURRENT APPLICATION DATA:  
; APPLICATION NUMBER: US/08/026,758  
; FILING DATE: 19930305  
; CLASSIFICATION: 424  
; ATTORNEY/AGENT INFORMATION:  
; NAME: OBLON, No. 5780021man F.  
; REGISTRATION NUMBER: 24,618  
; REFERENCE/DOCKET NUMBER: 1126-096-0  
; TELECOMMUNICATION INFORMATION:  
; TELEPHONE: (703) 413-3000  
; TELEFAX: (703) 413-2220

TELEX: 248855 OPAT UR  
; INFORMATION FOR SEQ ID NO: 7:  
; SEQUENCE CHARACTERISTICS:  
; LENGTH: 189 amino acids  
; TYPE: amino acid  
; TOPOLOGY: unknown  
; MOLECULE TYPE: protein  
; FEATURE:  
; NAME/KEY: Protein  
; LOCATION: 24..189  
; OTHER INFORMATION: /note= "IFN-alpha-5(G) "  
US-08-026-758-7

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Best Local Similarity 99.5%; Pred. No. 9,2e-104;  
Matches 188; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MALPVLIMLVNCKSISGLGCDLPQTHSLSNRRTIMIAQGRISPFSCLDKRDHFG 60  
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DB 61 PPOEFPGNQFOKAQAI SVLHEMIQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLE 120  
QY 121 ACMQEVGEDTPLMNVDSILTVRKYFORITLVLTCKYSPCAWEVVAEIMRSFSLSAN 180  
DB 121 ACMQEVGEDTPLMNVDSILTVRKYFORITLVLTCKYSPCAWEVVAEIMRSFSLSAN 180  
QY 181 LQERLRKE 189  
DB 181 LQERLRKE 189

RESULT 4  
US-09-206-936-11  
; Sequence 11, Application US/09206936A  
; Patent No. 6300475  
; GENERAL INFORMATION:  
; APPLICANT: Chen, Jian  
; APPLICANT: Wood, William I.  
; TITLE OF INVENTION: No. 6300475el Interferon  
; FILE REFERENCE: P122481  
; CURRENT APPLICATION NUMBER: US/09/206,936A  
; CURRENT FILING DATE: 1998-12-07  
; EARLIER APPLICATION NUMBER: US 60/067,897  
; EARLIER FILING DATE: 1998-12-08  
; NUMBER OF SEQ ID NOS: 22  
; SEQ ID NO 11  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Homo sapiens  
US-09-206-936-11

Query Match 99.1%; Score 969; DB 2; Length 189;  
Best Local Similarity 99.5%; Pred. No. 1,6e-103;  
Matches 188; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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QY 121 ACMQEVGEDTPLMNVDSILTVRKYFORITLVLTCKYSPCAWEVVAEIMRSFSLSAN 180  
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QY 181 LQERLRKE 189  
DB 181 LQERLRKE 189

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RESULT 5
US-08-026-758-19
; Sequence 19, Application US/08026758
; Patent No. 5780021
GENERAL INFORMATION:
APPLICANT: SOBEL, DOUGLAS O.
TITLE OF INVENTION: A METHOD FOR TREATING AUTOIMMUNE
DISEASES USING ALPHA-INTERFERON AND/OR BETA-INTERFERON
NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESS: OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
P.C.
CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/026,758
FILING DATE: 19930305
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Oblon, No. 5780021man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 1126-096-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 413-3000
TELEFAX: (703) 413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 189 amino acids
TYPE: amino acid
TOPOLOGY: unknown
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 24..189
OTHER INFORMATION: /note="IFN-alpha-Gk-1"
US-08-026-758-19

Query Match 95.4%; Score 933; DB 1; Length 189;
Best Local Similarity 95.2%; Pred. No. 2.2e-99;
Matches 180; Conservative 5; Mismatches 4; Indels 0; Gaps 0;

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QY 121 ACMMQVEVEDTPLMNVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSAN 180
DB 121 ACMMQVEVEDTPLMNVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSAN 180
QY 181 LOERLRKE 189
DB 181 LOERLRKE 189

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GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLO01307
CURRENT APPLICATION NUMBER: US/09/949,016
PRIOR FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastsEq for Windows Version 4.0
SEQ ID NO 9682
LENGTH: 189
TYPE: PRT
ORGANISM: Human
US-09-949-016-9682

Query Match 88.8%; Score 868; DB 2; Length 189;
Best Local Similarity 87.8%; Pred. No. 6.8e-92;
Matches 166; Conservative 12; Mismatches 11; Indels 0; Gaps 0;

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DB 61 PPOEFDNQGOKQAISVLHEMIQOTFNLFSTKDSATWDETLDDKFTYELYOQNDLE 120
QY 121 ACMMQVEVEDTPLMNVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSAN 180
DB 121 ACMMQVEVEDTPLMNVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSAN 180
QY 181 LOERLRKE 189
DB 181 LOERLRKE 189

RESULT 7
US-09-949-016-9683
; Sequence 9683, Application US/09949016
; Patent No. 6812339
GENERAL INFORMATION:
APPLICANT: VENTER, J. Craig et al.
TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
FILE REFERENCE: CLO01307
CURRENT APPLICATION NUMBER: US/09/949,016
PRIOR FILING DATE: 2000-04-14
PRIOR APPLICATION NUMBER: 60/241,755
PRIOR FILING DATE: 2000-10-20
PRIOR APPLICATION NUMBER: 60/237,768
PRIOR FILING DATE: 2000-10-03
PRIOR APPLICATION NUMBER: 60/231,498
PRIOR FILING DATE: 2000-09-08
NUMBER OF SEQ ID NOS: 207012
SOFTWARE: FastsEq for Windows Version 4.0
SEQ ID NO 9683
LENGTH: 189
TYPE: PRT
ORGANISM: Human
US-09-949-016-9683

Query Match 88.8%; Score 868; DB 2; Length 189;
Best Local Similarity 87.8%; Pred. No. 6.8e-92;
Matches 166; Conservative 12; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPVLIMALVYNCKSGISGCDLPQTHSLSNRRRTIMAMQGRISPFSCLDKRDHFG 60
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QY 181 LOERLRKKE 189
Db 181 FOERLRKKE 189

RESULT 8
US-09-949-016-9684
; Sequence 9684, Application US/09949016
; Patent No. 6812339
; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES ASSOCIATED
; WITH HUMAN DISEASE, METHODS OF DETECTION AND USES THEREOF
; FILE REFERENCE: CLO01307
; CURRENT APPLICATION NUMBER: US/09/949,016
; PRIOR FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 9684
; LENGTH: 189
; TYPE: PR7
; ORGANISM: Human
US-09-949-016-9684

Query Match 88.8%; Score 868; DB 2; Length 189;
Best Local Similarity 87.8%; Pred. No. 6.8e-92;
Matches 166; Conservative 12; Mismatches 11; Indels 0; Gaps 0;

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Db 181 FOERLRKKE 189

RESULT 9
US-08-026-758-1
; Sequence 1, Application US/08026758
; Patent No. 5780021
; GENERAL INFORMATION:
; APPLICANT: SOBEL, DOUGLAS O.
; TITLE OF INVENTION: A METHOD FOR TREATING AUTOIMMUNE
; DISEASES USING ALPHA-INTERFERON AND/OR BETA-INTERFERON
; NUMBER OF SEQUENCES: 26
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: OBION, SPIVAK, MCCLELLAND, MAIER & NEUSTADT,
; ADDRESSER: P.C.
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STREET: 1755 S. Jefferson Davis Highway, Suite 400
CITY: Arlington
STATE: Virginia
COUNTRY: U.S.A.
ZIP: 22202
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/026,758
FILING DATE: 19930305
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: OBION, No. 5780021man F.
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 1126-096-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 413-3000
TELEFAX: (703) 413-2220
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 189 amino acids
TYPE: amino acid
TOPOLOGY: unknown
MOLECULE TYPE: protein
FEATURE:
NAME/KEY: Protein
LOCATION: 24..189
OTHER INFORMATION: /note= "IFN-alpha consensus"
FEATURE:
NAME/KEY: Modified-site
LOCATION: 55
OTHER INFORMATION: /note= "The one-letter code at position
OTHER INFORMATION: 55 appears to be a typographical error in Table 1 of the
OTHER INFORMATION: specification."
FEATURE:
NAME/KEY: Modified-site
LOCATION: 124
OTHER INFORMATION: /note= "The one-letter code at position
OTHER INFORMATION: 124 appears to be a typographical error in Table 1 of the
OTHER INFORMATION: specification."
US-08-026-758-1

Query Match 87.4%; Score 855; DB 1; Length 189;
Best Local Similarity 86.8%; Pred. No. 2.1e-90;
Matches 164; Conservative 12; Mismatches 13; Indels 0; Gaps 0;

QY 1 MALPVLIMAVLVNCKSGICGLDLPQTHSLSNRRITIMAMQGRISPFSCLDKRDHFG 60
Db 1 MASPFALMALVVLSCSSCSIGCDLPQTHSLGNRRALLLAQMGRISPFSCLDKRDHFG 60
QY 61 PPOEFDDNQPOKQAISVLEHMIQOTFNLFSTKSSATWDETLDDKFTYELYOQNDLE 120
Db 61 PPOEFDDNQPOKQAISVLEHMIQOTFNLFSTKSSATWDETLDDKFTYELYOQNDLE 120
QY 121 ACMQOEVEGVEDTPLMANVDSILTVRKYPORITLYLTEKKYSPCAWEVVAEIMRSPFSLSAN 180
Db 121 ACVIOEVEGVEETPLMANVDSILAVKKYFORITLYLTEKKYSPCAWEVVAEIMRSPFSLSKI 180
QY 181 LOERLRKKE 189
Db 181 LOERLRKKE 189

RESULT 10
US-07-145-002B-24
; Sequence 24, Application US/07145002B
; Patent No. 6482613
; GENERAL INFORMATION:
; APPLICANT: Goeddel, David V.
```



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; APPLICANT: Pestka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE REFERENCE: 1803-0088-999
; CURRENT APPLICATION NUMBER: US/07/145,002B
; NUMBER OF SEQ ID NOS: 70
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 24
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-07-145-002B-24

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Query Match      87.1%; Score 852; DB 2; Length 189;
Best Local Similarity 85.7%; Pred. No. 4.8e-90;
Matches 162; Conservative 15; Mismatches 12; Indels 0; Gaps 0;

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QY 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60
DB 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60
QY 61 PPOEFPDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWDETLDDKFTYELVQOINDLE 120
DB 61 PPOEFPDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWDETLDDKFTYELVQOINDLE 120
QY 121 ACMAQGVGVEDTPLMNVDSILTVRKYFORITLYLTKKYSPCAMEVVRARIMRSFSLSAN 180
DB 121 ACVIOEVGVEETPLMNVDSILAVRKYFORITLYLMEKKYSCAMEVVRARIMRSFSTN 180
QY 181 LOERLRKE 189
DB 181 LOERLRKE 189

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## RESULT 11

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US-06-256-204C-24
; Sequence 24, Application US/06256204C
; Patent No. 6610830
; GENERAL INFORMATION:
; APPLICANT: Goedeel, David V.
; APPLICANT: Pestka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE REFERENCE: 1803-0025-999
; CURRENT APPLICATION NUMBER: US/06/256,204C
; CURRENT FILING DATE: 1981-04-21
; NUMBER OF SEQ ID NOS: 85
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 24
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-06-256-204C-24

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Query Match      87.1%; Score 852; DB 2; Length 189;
Best Local Similarity 85.7%; Pred. No. 4.8e-90;
Matches 162; Conservative 15; Mismatches 12; Indels 0; Gaps 0;

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QY 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60
DB 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60
QY 61 PPOEFPDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWDETLDDKFTYELVQOINDLE 120
DB 61 PPOEFPDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWDETLDDKFTYELVQOINDLE 120
QY 121 ACMAQGVGVEDTPLMNVDSILTVRKYFORITLYLTKKYSPCAMEVVRARIMRSFSLSAN 180
DB 121 ACVIOEVGVEETPLMNVDSILAVRKYFORITLYLMEKKYSCAMEVVRARIMRSFSTN 180
QY 181 LOERLRKE 189
DB 181 LOERLRKE 189

```

```

DB 181 LOERLRKE 189

```

## RESULT 12

```

US-09-206-935-19
; Sequence 19, Application US/09206935
; Patent No. 6299877
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Godowski, Paul
; APPLICANT: Wood, William I.
; APPLICANT: Zhang, Dong-Xiao
; TITLE OF INVENTION: NOVEL TYPE I INTERFERONS
; FILE REFERENCE: 11669,50US05
; CURRENT APPLICATION NUMBER: US/09/206,935
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: 60/084,045
; EARLIER FILING DATE: 1998-05-04
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 19
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-935-19

```

```

Query Match      87.0%; Score 851; DB 2; Length 189;
Best Local Similarity 86.2%; Pred. No. 6.2e-90;
Matches 163; Conservative 15; Mismatches 11; Indels 0; Gaps 0;

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QY 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60
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DB 61 PPOEFPDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWDETLDDKFTYELVQOINDLE 120
QY 121 ACMAQGVGVEDTPLMNVDSILTVRKYFORITLYLTKKYSPCAMEVVRARIMRSFSLSAN 180
DB 121 ACVIOEVGVEETPLMNVDSILAVRKYFORITLYLTKKYSPCAMEVVRARIMRSFSLSKI 180
QY 181 LOERLRKE 189
DB 181 LOERLRKE 189

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## RESULT 13

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US-09-206-936-19
; Sequence 19, Application US/09206936A
; Patent No. 6300475
; GENERAL INFORMATION:
; APPLICANT: Chen, Jian
; APPLICANT: Wood, William I.
; TITLE OF INVENTION: NO. 6300475el Interferon
; FILE REFERENCE: P1224R1
; CURRENT APPLICATION NUMBER: US/09/206,936A
; CURRENT FILING DATE: 1998-12-07
; EARLIER APPLICATION NUMBER: US 60/067,897
; EARLIER FILING DATE: 1998-12-08
; NUMBER OF SEQ ID NOS: 22
; SEQ ID NO 19
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-206-936-19

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Query Match      87.0%; Score 851; DB 2; Length 189;
Best Local Similarity 86.2%; Pred. No. 6.2e-90;
Matches 163; Conservative 15; Mismatches 11; Indels 0; Gaps 0;
QY 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60
DB 1 MALPFLMALVVLNCKSGICGDLPTQTHSLNRRRTLMIAQGRISPSCLKDRHDFG 60

```

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Db      1 MALSFLLMALVNLVSKSICSLGCDLPQTHSLGNRRALLLAQMGRISPFSCLDKDRHDFG 60
Qy      61 FPOEFDPGNQFOKAQAISVLHEMIQOTFNLSTKSSATWDETLIDKRYTELXOOLNDLE 120
Db      61 FPOEFDPGNQFOKAQAISVLHEMIQOTFNLSTKSSATWDESLKSTELNOQLNDME 120
Qy      121 ACMQOEVGEDTPLMNVDISILTVRKYFORITLYLTEKKYSPCAMEVVRAEIMRSFSLSAN 180
Db      121 ACVIOEVGEETPLMNVDISILAVKKYFORITLYLTEKKYSPCAMEVVRAEIMRSFSLSKI 180
Qy      181 LOERLRKE 189
Db      181 FOERLRKE 189

RESULT 14
US-07-145-002B-12
; Sequence 12, Application US/07145002B
; Patent No. 6482613
; GENERAL INFORMATION:
; APPLICANT: Goeddel, David V.
; APPLICANT: Peetka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE OF INVENTION: LEUKOCYTE INTERFERONS
; FILE REFERENCE: 1803-0088-999
; CURRENT APPLICATION NUMBER: US/07/145,002B
; CURRENT FILING DATE: 1989-01-19
; NUMBER OF SEQ ID NOS: 70
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 12
; LENGTH: 189
; TYPE: PRF
; ORGANISM: Homo sapiens
US-07-145-002B-12

Query Match      87.0%; Score 851; DB 2; Length 189;
Best Local Similarity 86.2%; Pred. No. 6.2e-90;
Matches 163; Conservative 15; Mismatches 11; Indels 0; Gaps 0;
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Qy      61 FPOEFDPGNQFOKAQAISVLHEMIQOTFNLSTKSSATWDETLIDKRYTELXOOLNDLE 120
Db      61 FPOEFDPGNQFOKAQAISVLHEMIQOTFNLSTKSSATWDESLKSTELNOQLNDME 120
Qy      121 ACMQOEVGEDTPLMNVDISILTVRKYFORITLYLTEKKYSPCAMEVVRAEIMRSFSLSAN 180
Db      121 ACVIOEVGEETPLMNVDISILAVKKYFORITLYLTEKKYSPCAMEVVRAEIMRSFSLSKI 180
Qy      181 LOERLRKE 189
Db      181 FOERLRKE 189

RESULT 15
US-07-145-002B-16
; Sequence 16, Application US/07145002B
; Patent No. 6482613
; GENERAL INFORMATION:
; APPLICANT: Goeddel, David V.
; APPLICANT: Peetka, Sidney
; TITLE OF INVENTION: MICROBIAL PRODUCTION OF MATURE HUMAN
; FILE OF INVENTION: LEUKOCYTE INTERFERONS
; FILE REFERENCE: 1803-0088-999
; CURRENT APPLICATION NUMBER: US/07/145,002B
; CURRENT FILING DATE: 1989-01-19
; NUMBER OF SEQ ID NOS: 70
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 16
; LENGTH: 189
; TYPE: PRF
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; ORGANISM: Homo sapiens
US-07-145-002B-16

Query Match      87.0%; Score 851; DB 2; Length 189;
Best Local Similarity 85.2%; Pred. No. 6.2e-90;
Matches 161; Conservative 16; Mismatches 12; Indels 0; Gaps 0;

Qy      1 MALPFVLLMALVNLVCKSICSLGCDLPQTHSLNRRITLIMAMQGRISPFSCLDKDRHDFG 60
Db      1 MALPFLLMALVNLVSKSICSLGCDLPQTHSLNRRITLIMAMQGRISPFSCLDKDRHDFE 60
Qy      61 FPOEFDPGNQFOKAQAISVLHEMIQOTFNLSTKSSATWDETLIDKRYTELXOOLNDLE 120
Db      61 FPOEFDPGNQFOKAQAISVLHEMIQOTFNLSTKSSATWDETLIDKRYTELXOOLNDLE 120
Qy      121 ACMQOEVGEDTPLMNVDISILTVRKYFORITLYLTEKKYSPCAMEVVRAEIMRSFSLSAN 180
Db      121 ACVIOEVGEETPLMNVDISILAVKKYFORITLYLTEKKYSPCAMEVVRAEIMRSFSLSTN 180
Qy      181 LOERLRKE 189
Db      181 LOKRLRRKD 189
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Search completed: December 15, 2005, 13:02:43  
Job time : 48 secs

GenCore version 5.1.6  
Copyright (c) 1993 - 2005 Compugen Ltd.

# OM protein - protein search, using sw model

Run on: December 15, 2005, 12:49:23 ; Search time 230 Seconds  
(without alignments)  
579,760 Million cell updates/sec

Title: US-10-698-402-2

Perfect score: 978  
Sequence: 1 MALPFLVLMALVINCCKSIC.....EIKMSFSLSANIGERLARKK 189

Scoring table:  
BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2166443 seqs, 705528306 residues  
Total number of hits satisfying chosen parameters: 2166443

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Uniprot 05.80: \*  
1: uniprot\_sprot: \*  
2: uniprot\_crembl: \*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	978	100.0	189	1 IFNA5_HUMAN	P01569 homo sapien
2	978	100.0	189	2 Q52LX3_HUMAN	P01569 homo sapien
3	853	87.2	189	1 IFN21_HUMAN	P01568 homo sapien
4	853	87.2	189	2 Q5VWD1_HUMAN	P01570 homo sapien
5	845	86.4	189	1 IFN14_HUMAN	P01570 homo sapien
6	845	86.4	189	2 Q5VZ56_HUMAN	P01570 homo sapien
7	838	85.7	189	1 IFNA6_HUMAN	P05013 homo sapien
8	838	85.7	189	2 Q5VYQ1_HUMAN	P05013 homo sapien
9	832	85.1	189	2 Q52L88_HUMAN	P01568 homo sapien
10	830	84.9	189	1 IFNA4_HUMAN	P05014 homo sapien
11	830	84.9	189	2 Q5VY15_HUMAN	P01568 homo sapien
12	829	84.8	181	2 Q14608_HUMAN	P01562 homo sapien
13	828	84.7	189	1 IFNA1_HUMAN	P01562 homo sapien
14	828	84.7	189	2 Q5VYQ2_HUMAN	P01562 homo sapien
15	821	83.9	189	1 IFN17_HUMAN	P01571 homo sapien
16	821	83.9	189	2 Q5VZ53_HUMAN	P01566 homo sapien
17	820	83.8	189	1 IFN10_HUMAN	P01566 homo sapien
18	820	83.8	189	2 Q5VY12_HUMAN	P01566 homo sapien
19	811	82.9	189	2 Q5VY17_HUMAN	P01567 homo sapien
20	809.5	82.8	188	2 Q5VY18_HUMAN	P01567 homo sapien
21	806.5	82.5	188	1 IFNA2_HUMAN	P01563 homo sapien
22	805	82.3	189	1 IFN16_HUMAN	P01563 homo sapien
23	805	82.3	189	2 Q5VY12_HUMAN	P01567 homo sapien
24	795	81.3	189	1 IFNA7_HUMAN	P01567 homo sapien
25	795	81.3	189	2 Q5VY14_HUMAN	P01567 homo sapien
26	794	81.2	189	2 Q14618_HUMAN	P01567 homo sapien
27	792	81.0	189	2 Q5VY17_HUMAN	P01567 homo sapien
28	778	79.6	189	1 IFNA8_HUMAN	P01567 homo sapien
29	778	79.6	189	2 Q5VY18_HUMAN	P01567 homo sapien
30	773	79.0	174	2 Q5VY12_HUMAN	P01567 homo sapien
31	742	75.9	184	1 IFNA4_HUMAN	P01567 homo sapien

32	738	75.5	184	1 IFNA2_HUMAN	P01567 homo sapien
33	736	75.3	184	1 IFNA1_HUMAN	P01567 homo sapien
34	730	74.6	184	1 IFNA3_HUMAN	P01567 homo sapien
35	728.5	74.5	166	2 Q5VY14_HUMAN	P01567 homo sapien
36	728	74.4	166	2 Q5VY18_HUMAN	P01567 homo sapien
37	674.5	69.0	154	2 Q5VY12_HUMAN	P01567 homo sapien
38	670	68.5	189	1 IFNA1_PIG	P01567 homo sapien
39	667	68.2	189	2 Q5VY18_PIG	P01567 homo sapien
40	640	65.4	189	2 Q5VY12_PIG	P01567 homo sapien
41	628	64.2	189	2 Q5VY18_PIG	P01567 homo sapien
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43	624	63.8	189	1 IFNA1_BOVIN	P01567 homo sapien
44	624	63.8	189	1 IFNA1_BOVIN	P01567 homo sapien
45	619	63.3	166	2 Q5VY12_PIG	P01567 homo sapien

## ALIGNMENTS

RESULT 1  
IFNA5\_HUMAN STANDARD, PRT, 189 AA.  
ID IFNA5\_HUMAN  
AC P01569;  
DT 21-JUL-1986 (Rel. 01, Created)  
DT 13-AUG-1987 (Rel. 05, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Interferon alpha-5 precursor (Interferon alpha-G) (Irf1 G) (Interferon alpha-61).  
DE alpha-61).  
GN Name=IFNA5;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae; Homo.  
OC Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE. PubMed=4057246;  
RX MEDLINE=86037205; PubMed=4057246;  
RA Henco K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R., Hochstadt J., Kovacic T., Paek M., Schambeck A., Schmid J., Todokoro K., Waelchli M., Nagata S., Weissmann C.;  
RT "Structural relationship of human interferon alpha genes and pseudogenes".  
RU J. Mol. Biol. 185:227-260 (1985).  
[2]  
RN NUCLEOTIDE SEQUENCE (LARGE SCALE GENOMIC DNA).  
RP PubMed=15164053; DOI=10.1038/nature02465;  
RX Humphrey S.J., Oliver K., Hunt A.R., Plumb R.W., Loveland J.E., Howe K.L., Andrews T.D., Searle S., Hunt S.E., Scott C.E., Jones M.C., Altschough R., Almeida J.P., Ambrose K.D., Ashwell R.I.S., Babbage A.K., Babbage S., Baguley C.L., Bailey J., Banerjee R., Barker D.J., Barlow K.F., Bates J., Beasley H., Beasley O., Bird C.P., Bray-Allen S., Brown A.J., Brown J.Y., Burford D., Buttrill W., Burton J., Carder C., Carter N.P., Chapman J.C., Chen Y., Clarke G., Clark S.Y., Clee C.M., Clegg S., Collier R.E., Cohen N., Crolier M., Cummings A.T., Davies J., Dhani P., Dunn M., Dutta I., Dyer L.W., Earls M.E., Faulkner L., Fleming C.J., Frankish A., Franklin J.A., French L., Fricker D.G., Garner P., Garnett J., Ghori J., Gilbert J.G.R., Gison C., Griffiths R., Guy J., Hall R.E., Griffiths C., Griffiths-Jones S., Grocock R., Guy J., Hall R.E., Hammond S., Harley J.L., Harrison E.S.I., Hart E.A., Heath P.D., Henderson C.D., Hopkins B.L., Howard P.J., Howden P.J., Huckle B., Johnson C., Johnson D., Joy A.A., Kay M., Keenan S., Kerhaw J.K., Kimberley A.M., King A., Knights A., Laird G.K., Langford C., Lawlor S., Leongamornlert D.A., Leverisa M., Lloyd C., Lloyd D.M., Lovell J., Martin S., Mashreghi-Mohammadi M., Matthews L., McLaren S., McLeay K.E., Murray A., Milne S., Nickerson T., Nisbett J., Nordstiek G., Pearce A.V., Peck A.I., Porter K.M., Pandian R., Pelin S., Phillimore B., Povey S., Ramsey Y., Rand V., Scharie M., Sehna H.K., Showkeen R., Sims S.K., Skuce C.D., Smith M., Steward C.A., Swatbreck D., Sycamore N., Teeter J., Thorpe A., Tracey A., Tromans A., Thomas D.W., Wall M., Wallis J.M., West A.P., Whitehead S.L., Willey D.L., Williams S.A., Wilming L., Wray P.W., Young L., Ashurst J.L., Coulson A., Blocker H., Durbin R.,

RA Suleton J.E., Hubbard T., Jackson M.J., Bentley D.R., Beck S.,  
 RA Rogers J., Dunham I.:  
 RA "DNA sequence and analysis of human chromosome 9.";  
 RL Nature 429:369-374(2004).  
 (3)  
 RN NUCLEOTIDE SEQUENCE OF 57-189.  
 RP TISSUE=脾脏;  
 RC MEDLINE=81148795; PubMed=6163083;  
 RA Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,  
 RA McCandless R., Seeburg P.H., Ulrich A., Yelverton E., Gray P.W.:  
 RA "The structure of eight distinct cloned human leukocyte interferon  
 RT cDNAs.";  
 RL Nature 290:20-26(1981).  
 RN [4]  
 RP PROTEIN SEQUENCE OF 22-36.  
 RX PubMed=15340161; DOI=10.1110/ps.04682504;  
 RA Zhang Z., Henzel W.J.:  
 RT "Signal peptide prediction based on analysis of experimentally  
 RT verified cleavage sites.";  
 RL Protein Sci. 13:2819-2824(2004).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 CC activities. Interferon stimulates the production of two enzymes: a  
 CC protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC -----  
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC -----  
 CC EMBL: X02956; CA26702.1; -; Genomic DNA.  
 DR EMBL: AL162420; CAH7189.1; -; Genomic DNA.  
 DR EMBL: V00541; CA23802.1; -; mRNA.  
 DR PIR: S43716; IVDU47.  
 DR HSP: P01563; ITP.  
 DR SMR: P01569; 24-189.  
 DR Ensembl: ENSG00000147873; Homo sapiens.  
 DR HGNC: HGNC:5426; IFNA5.  
 DR MIM: 147565; -;  
 DR GO: GO:0005126; P:hematopoietin/interferon-class (D200-domain. . .; TMS.  
 DR InterPro: IPR000471; Interferon abd.  
 DR PANTHER: PTHR11691; Interferon abd.  
 DR Pfam: PF00143; Interferon; 1.  
 DR PRINTS: PR00266; INTERFERONAB.  
 DR ProDom: PD000550; Interferon\_abd; 1.  
 DR PROSITE: PS00252; INTERFERON\_A\_B\_D; 1.  
 DR Antiviral defense; Cytokine; Direct protein sequencing;  
 KW Multigene family; Signal.  
 FT SIGNAL 1 21  
 FT CHAIN 22 189 Interferon alpha-5.  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 SQ SEQUENCE 189 AA; 21942 MW; C605992FE2E78043 CRC64;

Query Match 100.0%; Score 978; DB 1; Length 189;  
 Best Local Similarity 100.0%; Pred. No. 1,1e-76;  
 Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALPVLALMALVNLNCKSICSLGCDLPOTHSLSNRRTLIMAMQGRISPFSLCKRHDG 60  
 DB 1 MALPVLALMALVNLNCKSICSLGCDLPOTHSLSNRRTLIMAMQGRISPFSLCKRHDG 60  
 QY 61 PFOEFDFGQFOKAQAI SVLHEMIQOTFNLFSTKSSATWDETLDDKFTLEYQOLNDIE 120  
 DB 61 PFOEFDFGQFOKAQAI SVLHEMIQOTFNLFSTKSSATWDETLDDKFTLEYQOLNDIE 120  
 QY 121 ACMAQEVGVEDPPLMNVDSILTVRKRYFORITLYLTKKYSPCAMVAVRAEIMRSFSLAN 180  
 DB 121 ACMAQEVGVEDPPLMNVDSILTVRKRYFORITLYLTKKYSPCAMVAVRAEIMRSFSLAN 180  
 QY 181 LOERLRKE 189

DB 181 LOERLRKE 189  
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 ID 052LX3 HUMAN PRELIMINARY; PRT; 189 AA.  
 AC 052LX3  
 DT 13-SEP-2005 (TrEMBLrel. 31, Created)  
 DT 13-SEP-2005 (TrEMBLrel. 31, Last sequence update)  
 DT 13-SEP-2005 (TrEMBLrel. 31, Last annotation update)  
 DE Interferon, alpha 5.  
 GN Name=IFNA5;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;  
 OC Mammalia; Euteria; Euarchontoglires; Primates; Catarrhini; Hominiidae;  
 OC Homo.  
 OC NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Struhsberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shennan C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diachenko L., Marinina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stacieleto M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.R.,  
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.J.,  
 RA Raha S.S., Loguellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettelman M., Madan A.C., Rodriguez S., Sanchez A.,  
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butlerfield V.S.N., Krzywinski M.I., Skalska U., Smalls D.E.,  
 RA Scherch A., Schein J.E., Jones S.J.W., Marra M.A.,  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RC TISSUE=Brain;  
 RG NIH GGC Project;  
 RL Submitted (Apr-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 DR EMBL: BC093757; AA93757.1; -; mRNA.  
 DR EMBL: BC093755; AA93755.1; -; mRNA.  
 DR GO: GO:0005576; C:extracellular region; IEA.  
 DR GO: GO:0005126; P:hematopoietin/interferon-class (D200-domain. . .; IEA.  
 DR GO: GO:0006952; P:defense response; IEA.  
 KW Antiviral defense; Cytokine.  
 SQ SEQUENCE 189 AA; 21942 MW; C605992FE2E78043 CRC64;

Query Match 100.0%; Score 978; DB 2; Length 189;  
 Best Local Similarity 100.0%; Pred. No. 1,1e-76;  
 Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALPVLALMALVNLNCKSICSLGCDLPOTHSLSNRRTLIMAMQGRISPFSLCKRHDG 60  
 DB 1 MALPVLALMALVNLNCKSICSLGCDLPOTHSLSNRRTLIMAMQGRISPFSLCKRHDG 60  
 QY 61 PFOEFDFGQFOKAQAI SVLHEMIQOTFNLFSTKSSATWDETLDDKFTLEYQOLNDIE 120  
 DB 61 PFOEFDFGQFOKAQAI SVLHEMIQOTFNLFSTKSSATWDETLDDKFTLEYQOLNDIE 120  
 QY 121 ACMAQEVGVEDPPLMNVDSILTVRKRYFORITLYLTKKYSPCAMVAVRAEIMRSFSLAN 180  
 DB 121 ACMAQEVGVEDPPLMNVDSILTVRKRYFORITLYLTKKYSPCAMVAVRAEIMRSFSLAN 180  
 QY 181 LOERLRKE 189



OX NCBI\_TaxID=9606;  
 RN [1]  
 RN NUCLEOTIDE SEQUENCE.  
 RA Martin S.;  
 RN Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 RN [2]  
 RN NUCLEOTIDE SEQUENCE.  
 RP TISSUE=PCR rescued clones;  
 RC MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.2426038999;  
 RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,  
 RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalska U., Smalhus D.E.,  
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
 RN [3]  
 RN NUCLEOTIDE SEQUENCE.  
 RP TISSUE=PCR rescued clones;  
 RC NIH MGC Project;  
 RG Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 DR EMBL: AL390882; CAH70157.1; -; Genomic DNA.  
 DR EMBL: BC096699; AAH96699.1; -; mRNA.  
 DR SMR: OSVMD1; 24-189.  
 DR Ensembl: ENSG00000137080; Homo sapiens.  
 DR GO: GO:0005576; Cytoplasmic region; IEA.  
 DR GO: GO:0005126; Plasmalemma/interferon class (D200-domain. . .); IEA.  
 DR GO: GO:0006952; Defense response; IEA.  
 DR InterPro: IPR000471; Interferon\_abd.  
 DR Pfam: PF00143; Interferon\_1.  
 DR PRINTS: PR00266; INTERFERONAB.  
 DR SMART: SM00076; IFABD; 1.  
 DR PROSITE: PS00252; INTERFERON\_A-B\_D; 1.  
 DR Antiviral defense; Cytochrome.  
 KW SEQUENCE 189 AA; 21741 MW; F0B6C9C32905802 CRC64;  
 SQ

Query Match 87.2%; Score 853; DB 2; Length 189;  
 Beel Local Similarity 86.8%; Pred. No. 7, 6e-66;  
 Matches 164; Conservative 14; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPVLATLALVAVLCKSGISGCLPOTHSLSNRTTMMQMRISPFSCCLKDRHDFG 60  
 DB 1 MALSLSLMAVAVLVYSKISCSICGCLPOTHSLSNRTTMMQMRISPFSCCLKDRHDFG 60  
 QY 61 PFOEFEDGQFOKAQALISVLMHMIQOTFNLSTKSSATWETDILDKFYTELQOOLNDE 120  
 DB 61 PFOEFEDGQFOKAQALISVLMHMIQOTFNLSTKSSATWETDILDKFYTELQOOLNDE 120  
 QY 121 AAMMEVGEDTPLMNVDSILVVRKFGQITLYTEKKYSPAWVVRREIRSFSLAN 180  
 DB 121 AAVIVDEVGEEETPLMNVDSILVVRKFGQITLYTEKKYSPAWVVRREIRSFSLAN 180  
 QY 181 LQERLRKE 189  
 DB 181 LQERLRKE 189  
 DB 181 FQERLRKE 189

RESULT 5  
 IFN14\_HUMAN

ID IFN14\_HUMAN STANDARD; PRT; 189 AA.  
 AC P01570;  
 DT 21-JUL-1986 (Rel. 01, Created)  
 DT 21-JUL-1986 (Rel. 01, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Interferon alpha-14 precursor (Interferon alpha-H) (eIF H)  
 DE (Interferon lambda-2-H).  
 GN Name=IFN14;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Euteleostomi; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 OX NCBI\_TaxID=9606;  
 RN [1]  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=86037205; PubMed=4057246;  
 RA Hencho K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,  
 RA Hochstadt J., Kovacic T., Paek M., Schambbeck A., Schmid J.,  
 RA Todokoro K., Waelechi M., Nagata S., Weissmann C.;  
 RT "Structural relationship of human interferon alpha genes and  
 pseudogenes.";  
 RL J. Mol. Biol. 185:227-260 (1985).  
 RN [2]  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=81201124; PubMed=6165082;  
 RX Lawn R.M., Adelman J., Dull T.J., Gross M., Goeddel D.V., Ullrich A.;  
 RT "DNA sequence of two closely linked human leukocyte interferon  
 genes.";  
 RL Science 212:1159-1162 (1981).  
 RN [3]  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=81148795; PubMed=6163083;  
 RX Goeddel D.V., Leung D.W., Dull T.J., Gross M., Goeddel D.V., Ullrich A.;  
 RT "The structure of eight distinct cloned human leukocyte interferon  
 cDNAs.";  
 RL Nature 290:20-26 (1981).  
 RN [4]  
 RN NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RP MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.2426038999;  
 RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,  
 RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalska U., Smalhus D.E.,  
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
 RN [5]  
 RN PROTEIN SEQUENCE OF 24-53, AND CARBOHYDRATE-LINKAGE SITE ASN-95.  
 RP MEDLINE=98087498; PubMed=9425112;  
 RX Nyman T.A., Toeloe H., Parkkinen J., Kaikkinen N.;  
 RT "Identification of nine interferon-alpha subtypes produced by Sendai  
 virus-induced human peripheral blood leucocytes.";  
 RL Biochem. J. 329:295-302 (1998).  
 RN [6]  
 RN ABSENCE OF POLYMORPHISM.  
 RP MEDLINE=97067358; PubMed=8910771;  
 RX Huseain M., Gill D.S., Liao M.-J.;  
 RT "Identification of interferon-alpha 7, -alpha 14, and -alpha 21  
 variants in the genome of a large human population.";

RL J. Interferon Cytokine Rees. 16:853-859 (1996).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 CC activities. Interferon stimulates the production of two enzymes: a  
 CC protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC -----  
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC -----  
 DR EMBL; V00533; CA23794.1; -; Genomic DNA.  
 DR EMBL; X02959; CA26705.1; -; Genomic DNA.  
 DR EMBL; V00542; CA23803.1; -; mRNA.  
 DR EMBL; BC074956; AAH74956.1; -; mRNA.  
 DR PIR; A92916; IYHUI4.  
 DR HSSP; P01563; IITF.  
 DR SMR; P01570; 24-189.  
 DR Glycosylated; P01570; -.  
 DR HGNC; HGNC:5420; IFNA14.  
 DR MIM; 147579; -.  
 DR GO; GO:0005126; F:hematopoietin/interferon-classes (D200-domain. . .); TAS.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR PANTHER; PTHR11691; Interferon\_abd; 1.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR PRODOM; PD000550; Interferon abd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KW Antiviral defense; Cytokine; Direct protein sequencing; Glycoprotein;  
 KW Multigene family; Signal.  
 FT SIGNAL 1 23  
 FT CHAIN 24 189 Interferon alpha-14.  
 FT CARBOHYD 95 95 N-linked (GlcNAc. . .).  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 FT CONFLICT 175 175 L->F (in Ref. 3).  
 SQ SEQUENCE 189 AA; 22063 MW; B6B71E2F0D644FE7 CRC64;  
 Query Match 86.4%; Score 845; DB 1; Length 189;  
 Best Local Similarity 84.7%; Pred. No. 3.8e-65;  
 Matches 160; Conservative 16; Mismatches 13; Indels 0; Gaps 0;  
 QY 1 MALPFLMALVNLNCKSGICGCDLPQTHSLSNRRTIMAAQGRISPFSCLDKRDHFG 60  
 DB 1 MALPFLMALVNLNCKSGICGCDLPQTHSLSNRRTIMAAQGRISPFSCLDKRDHFG 60  
 QY 61 FPQEPFQNGQFOKAQAI SVLHEMIQQTFFNLSTYDSSATWDETLLDKFYTELQOQNDLE 120  
 DB 61 FPQEPFQNGQFOKAQAI SVLHEMIQQTFFNLSTYDSSATWDETLLDKFYTELQOQNDLE 120  
 QY 121 ACMMQEVGEVETPLMNNDSILTVRKYPQRTILYLTETKYSFCAWEVVAEIMRSFSLSAN 180  
 DB 121 ACMMQEVGEVETPLMNNDSILTVRKYPQRTILYLTETKYSFCAWEVVAEIMRSFSLSAN 180  
 QY 121 ACVIOGVGEVETPLMNNDSILAVKKYFQRTILYLTETKYSFCAWEVVAEIMRSFSLSTN 180  
 DB 121 ACVIOGVGEVETPLMNNDSILAVKKYFQRTILYLTETKYSFCAWEVVAEIMRSFSLSTN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189  
 RESULT 6  
 QSVZ56\_HUMAN  
 ID QSVZ56\_HUMAN PRELIMINARY; PRT; 189 AA.  
 AC QSVZ56;  
 DT 01-FEB-2005 (TrEMBLrel. 29, Created)  
 DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)  
 DE 01-FEB-2005 (TrEMBLrel. 29, Last annotation update)  
 GN Interferon, alpha 14.  
 GN Name=IFNA14; ORFNames=RP11-380P16.9-001;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;

OC Homo.  
 OX NCBI\_Taxid=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RL Beasley H.;  
 RA Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 DR EMBL; AL162420; CAH73187.1; -; Genomic DNA.  
 DR SMR; QSVZ56; 24-189.  
 DR GO; GO:0005126; C:extracellular region; IEA.  
 DR GO; GO:0005126; F:hematopoietin/interferon-classes (D200-domain. . .); IEA.  
 DR GO; GO:0006952; P:defense response; IEA.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR Pfam; PF00143; Interferon; 1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR SMART; SM00076; Ifabd; 1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KW Antiviral defense; Cytokine.  
 SQ SEQUENCE 189 AA; 22063 MW; B6B71E2F0D644FE7 CRC64;  
 Query Match 86.4%; Score 845; DB 2; Length 189;  
 Best Local Similarity 84.7%; Pred. No. 3.8e-65;  
 Matches 160; Conservative 16; Mismatches 13; Indels 0; Gaps 0;  
 QY 1 MALPFLMALVNLNCKSGICGCDLPQTHSLSNRRTIMAAQGRISPFSCLDKRDHFG 60  
 DB 1 MALPFLMALVNLNCKSGICGCDLPQTHSLSNRRTIMAAQGRISPFSCLDKRDHFG 60  
 QY 61 FPQEPFQNGQFOKAQAI SVLHEMIQQTFFNLSTYDSSATWDETLLDKFYTELQOQNDLE 120  
 DB 61 FPQEPFQNGQFOKAQAI SVLHEMIQQTFFNLSTYDSSATWDETLLDKFYTELQOQNDLE 120  
 QY 121 ACMMQEVGEVETPLMNNDSILTVRKYPQRTILYLTETKYSFCAWEVVAEIMRSFSLSAN 180  
 DB 121 ACMMQEVGEVETPLMNNDSILTVRKYPQRTILYLTETKYSFCAWEVVAEIMRSFSLSAN 180  
 QY 121 ACVIOGVGEVETPLMNNDSILAVKKYFQRTILYLTETKYSFCAWEVVAEIMRSFSLSTN 180  
 DB 121 ACVIOGVGEVETPLMNNDSILAVKKYFQRTILYLTETKYSFCAWEVVAEIMRSFSLSTN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189  
 RESULT 7  
 IFNA6\_HUMAN  
 ID IFNA6\_HUMAN STANDARD; PRT; 189 AA.  
 AC P05013;  
 DT 13-AUG-1987 (Rel. 05, Created)  
 DT 13-AUG-1987 (Rel. 05, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Interferon alpha-6 precursor (Interferon alpha-K) (Leif K) (Interferon  
 DE alpha-54).  
 GN Name=IFNA6;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 OX NCBI\_Taxid=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RX MEDLINE=86037205; PubMed=4057246;  
 RA Henco K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,  
 RA Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,  
 RA Todoroko K., Waelchli M., Nagata S., Weissmann C.;  
 RT "Structural relationship of human interferon alpha genes and  
 RT pseudogenes.";  
 RT J. Mol. Biol. 185:227-260 (1985).  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Schmitt C.M., Schuler G.D.,  
 RA Altshuler S.F., Zeeberg B., Buetow K.H., Scheefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Matusina K., Farmer A.A., Rubin G.M., Hong L.,



RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carrinci P., Prange C.,  
 RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
 RA Villalón D.K., Wozley D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butlerfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,  
 RA Schercher A., Schein J.E., Jones S.J.M., Marra M.A.,  
 RA "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
 RN [3]  
 RP PROTEIN SEQUENCE OF 21-35.  
 RX PubMed=15340161; DOI=10.1100/ps.04682504;  
 RA Zhang Z., Henzel W.J.,  
 RT "Signal peptide prediction based on analysis of experimentally  
 RT verified cleavage sites.";  
 RL Protein Sci. 13:2819-2824 (2004).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 CC activities. Interferon stimulates the production of two enzymes: a  
 CC protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC -----  
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC -----  
 CC EMBL, X02958; CA26704.1; -; Genomic DNA.  
 DR EMBL, BC069471; AAH69471.1; -; mRNA.  
 DR PIR, A23753; IVDH16.  
 DR HSSP, P01563; IIRF.  
 DR SMR, P05013; 24-189.  
 DR Ensembl, ENSG00000120235; Homo sapiens.  
 DR HGNC, HGNC:15427; IFNA6.  
 DR MIM, 147566; -.  
 DR GO, GO:0005126; F:hematopoietin/interferon-clas (D200-domain. . .; NAs.  
 DR GO, GO:0006915; P:response to virus; NAs.  
 DR InterPro, IPR000471; Interferon abd.  
 DR PANTHER, PTHR11691; Interferon\_abd\_1.  
 DR Pfam, PF00143; Interferon\_1.  
 DR PRINTS, PR00266; INTERFERONAB.  
 DR PRODOM, PD000550; Interferon abd; 1.  
 DR PROSITE, PS00252; INTERFERON\_A\_B\_D; 1.  
 DR KX Antiviral defense; Cytokine; Direct protein sequencing;  
 DR Multigene family; Signal.  
 FT SIGNAL 1 20  
 FT CHAIN 21 189 Interferon alpha-6.  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 SQ SEQUENCE 189 AA; 22141 MW; 8CF3F90F12C62E CRC64;  
 Query Match 85.7%; Score 838; DB 1; Length 189;  
 Best Local Similarity 86.2%; Pred. No. 1.5e-64;  
 Matches 163; Conservative 8; Mismatches 18; Indels 0; Gaps 0;  
 Oy 1 MALPVLMLAVLVNCKSCSGCGLPOTHSINRRTLMIMOMORISPFGLTKDRHFG 60  
 Db 1 MALPVLMLAVLVNCKSCSGCGLPOTHSINRRTLMIMOMORISPFGLTKDRHFG 60  
 Oy 61 FPOEFEDGQFOKAQAIISVHEMIQOTFNLFTSKSSATWDETLDDKFTLYQOLNLE 120  
 Db 61 FPOEFEDGQFOKAQAIISVHEMIQOTFNLFTSKSSATWDETLDDKFTLYQOLNLE 120  
 Oy 121 ACWQOEVGVETPLMNVDSILTVKRYFORITLYLTKKYSPCAEVVAEIMRSFSLAN 180  
 Db 121 ACWQOEVGVETPLMNVDSILTVKRYFORITLYLTKKYSPCAEVVAEIMRSFSLAN 180

Oy 181 LOERLRKE 189  
 Db 181 LOERLRKE 189  
 RESULT 8  
 OSV001\_HUMAN PRELIMINARY; PRT; 189 AA.  
 ID OSV001\_HUMAN PRELIMINARY; PRT; 189 AA.  
 AC OSV001\_HUMAN PRELIMINARY; PRT; 189 AA.  
 DT 01-FEB-2005 (TREMBlrel. 29, Created)  
 DT 01-FEB-2005 (TREMBlrel. 29, Last sequence update)  
 DT 13-SEP-2005 (TREMBlrel. 31, Last annotation update)  
 DE Interferon, alpha 6.  
 GN Name=IFNA6; ORFNames=RP11-354P17.7-001;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 OC NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RL Beasley H.;  
 RL Submitted (May-2005) to the EMBL/GenBank/DBJ databases.  
 RN [2]  
 RP NUCLEOTIDE SEQUENCE.  
 RL MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carrinci P., Prange C.,  
 RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
 RA Villalón D.K., Wozley D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butlerfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,  
 RA Schercher A., Schein J.E., Jones S.J.M., Marra M.A.,  
 RA "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences.";  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
 RN [3]  
 RP NUCLEOTIDE SEQUENCE.  
 RL TISSUE=PCR rescued clones;  
 RN NIH MGC Project;  
 RN Submitted (May-2005) to the EMBL/GenBank/DBJ databases.  
 RN [4]  
 RP NUCLEOTIDE SEQUENCE.  
 RL TISSUE=PCR rescued clones;  
 RN NIH MGC Project;  
 RN Submitted (JUN-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 DR EMBL, AL353732; CAH72903.1; -; Genomic DNA.  
 DR EMBL, BC096710; AAH96710.1; -; mRNA.  
 DR EMBL, BC096730; AAH96730.1; -; mRNA.  
 DR EMBL, BC098357; AAH98357.1; -; mRNA.  
 DR EMBL, BC096697; AAH96697.1; -; mRNA.  
 DR SMR, OSV001; 24-189.  
 DR Ensembl, ENSG00000120235; Homo sapiens.  
 DR GO, GO:0005126; F:hematopoietin/interferon-clas (D200-domain. . .; IEA.  
 DR GO, GO:0005126; F:hematopoietin/interferon-clas (D200-domain. . .; IEA.  
 DR GO, GO:0006952; P:defense response; IEA.  
 DR InterPro, IPR000471; Interferon\_abd.  
 DR Pfam, PF00143; Interferon\_1.  
 DR PRINTS, PR00266; INTERFERONAB.  
 DR SMART, SMO0076; IFabd; 1.



DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KW Activator defense; Cytokine; IEA.  
 SQ SEQUENCE 189 AA; 22141 MW; 8C7F3F90F12C562B CRC64;  
 Query Match 85.7%; Score 838; DB 2; Length 189;  
 Best Local Similarity 86.2%; Pred. No. 1.5e-64;  
 Matches 163; Conservative 8; Mismatches 18; Indels 0; Gaps 0;

QY 1 MALPFLVLMALVLTNCSGSLGCDLPQTHSLSNRRLTMTMAQGRISPSCLDRHDFG 60  
 DB 1 MALPFLVLMALVLTNCSGSLGCDLPQTHSLGHRRTMLLAQWRISLPSCLDRHDFR 60  
 QY 61 PPOEFPDGNQFOKQAISVHLEMIQOTFNLFTSKDSSATWDETLDDKFTYELYOQLNDLE 120  
 DB 61 PPOEFPDGNQFOKQAISVHLEMIQOTFNLFTSKDSSATWDETLDDKFTYELYOQLNDLE 120  
 QY 121 ACWQAEVGVETPLMNDVSIITVARKYFORITLYLTKKYSPCAWEVYRAEIMRSFSLSTN 180  
 DB 121 ACWQAEVGVETPLMNDVSIITVARKYFORITLYLTKKYSPCAWEVYRAEIMRSFSLSTN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

RESULT 9  
 Q52LB8\_HUMAN PRELIMINARY; PRT; 189 AA.  
 ID Q52LB8\_HUMAN  
 AC Q52LB8;  
 DT 13-SEP-2005 (TRENBLrel. 31, Created)  
 DT 13-SEP-2005 (TRENBLrel. 31, Last sequence update)  
 DT 13-SEP-2005 (TRENBLrel. 31, Last annotation update)  
 DE Interferon, alpha 13.  
 GN Name=IFNA13;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 NCBI\_TaxID=9606;  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.2426038999;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Schuler G.D.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Ueda T.B., Toshiyuki S., Carninci P., Prange C.,  
 RA Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaney S.J.,  
 RA Bogak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahey J., Helton E., Kettelman M., Madan A., Rodriguez S., Sanchez A.,  
 RA Whitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmitt J., Myers R.M.,  
 RA Buterfield Y.S.N., Krzywinski M.I., Skalska U., Smallus D.E.,  
 RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences."  
 RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).  
 RL [2]  
 RN NUCLEOTIDE SEQUENCE.  
 RP TISSUE=Brain;  
 RG NIH MGC Project;  
 RU Submitted (Apr-2005) to the EMBL/Genbank/DBSJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (by similarity).  
 DR EMBL; BC093988; AAH93988.1; -; mRNA.  
 DR SRR; 052LB8; 24-189.  
 DR Ensemble; ENSG00000120247; Homo sapiens.  
 DR GO; GO:0005576; C:extracellular region; IEA.

DR GO; GO:0005126; F:hematopoietic/in interferon-class (D300-domain. . .); IEA.  
 DR GO; GO:0006952; P:defense response; IEA.  
 DR InterPro; IPR000471; Interferon\_abd.  
 DR Pfam; PF00143; Interferon\_1.  
 DR PRINTS; PR00266; INTERFERONAB.  
 DR PRODOM; PD000550; Interferon\_abd\_1.  
 DR SMART; SM00076; IFabd\_1.  
 DR PROSITE; PS00252; INTERFERON\_A\_B\_D; 1.  
 KW Activator defense; Cytokine; IEA.  
 SQ SEQUENCE 189 AA; 21697 MW; 442F8B8754D88398 CRC64;  
 Query Match 85.1%; Score 832; DB 2; Length 189;  
 Best Local Similarity 84.7%; Pred. No. 5e-64;  
 Matches 160; Conservative 10; Mismatches 19; Indels 0; Gaps 0;

QY 1 MALPFLVLMALVLTNCSGSLGCDLPQTHSLSNRRLTMTMAQGRISPSCLDRHDFG 60  
 DB 1 MALPFLVLMALVLTNCSGSLGCDLPQTHSLSNRRLTMTMAQGRISPSCLDRHDFG 60  
 QY 61 PPOEFPDGNQFOKQAISVHLEMIQOTFNLFTSKDSSATWDETLDDKFTYELYOQLNDLE 120  
 DB 61 PPOEFPDGNQFOKQAISVHLEMIQOTFNLFTSKDSSATWDETLDDKFTYELYOQLNDLE 120  
 QY 121 ACWQAEVGVETPLMNDVSIITVARKYFORITLYLTKKYSPCAWEVYRAEIMRSFSLSTN 180  
 DB 121 ACWQAEVGVETPLMNDVSIITVARKYFORITLYLTKKYSPCAWEVYRAEIMRSFSLSTN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

RESULT 10  
 IFNA4\_HUMAN STANDARD; PRT; 189 AA.  
 ID IFNA4\_HUMAN  
 AC P05014; P13358;  
 DT 13-AUG-1987 (Rel. 05, Created)  
 DT 10-MAY-2005 (Rel. 47, Last sequence update)  
 DT 10-MAY-2005 (Rel. 47, Last annotation update)  
 DE Interferon alpha-4 precursor (Interferon alpha-4B) (Interferon alpha-  
 DE M1) (Interferon alpha-76).  
 GN Name=IFNA4;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
 OC Homo.  
 NCBI\_TaxID=9606;  
 RX MEDLINE=84307815; PubMed=6089830;  
 RA Henco K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,  
 RA Hochstadt J., Kovacic T., Raabek M., Schumbeck A., Schmid J.,  
 RA Todokoro K., Waelchli M., Nagata S., Weissmann C.;  
 RT "Structural relationship of human interferon alpha genes and  
 RT pseudogenes."  
 RT J. Mol. Biol. 185:227-260 (1995).  
 RL [2]  
 RN NUCLEOTIDE SEQUENCE.  
 RP MEDLINE=84307815; PubMed=6089830;  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.2426038999;  
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carrinchi P., Prange C.,  
 RA Rahn S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaly S.J.,  
 RA Boshk S.A., McKewen P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richiars S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulik S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Buterfield A.V.S.N., Krzyzinski M.I., Skalska U., Smalins D.B.,  
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.,  
 RT "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences.";  
 RT Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
 RN [4]  
 RN PROTEIN SEQUENCE OF 24-56.  
 RX MEDLINE=97474410; PubMed=9335434;  
 RA Nymen T.A., Toeloe H., Parkkinen J., Kalkkinen N.,  
 RT "Identification of nine interferon-alpha subtypes produced by Sendai  
 RT virus-induced human peripheral blood leucocytes.";  
 RN Biochem. J. 329:295-302(1998).  
 RN [5]  
 RN POLYMORPHISM.  
 RX MEDLINE=97474410; PubMed=9335434;  
 RA Hussein M., Gill D.S., Liao M.-J.;  
 RT "Both variant forms of interferon-alpha gene (IFNA4a and IFNA4b) are  
 RT present in the human population.";  
 RL J. Interferon Cytokine Res. 17:559-566(1997).  
 CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 CC activities. Interferon stimulates the production of two enzymes: a  
 CC protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- POLYMORPHISM: Two forms exist; alpha-4a (shown here) and alpha-4b.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC -----  
 CC This Swiss-Prot entry is copyright. It is produced through a collaboration  
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC -----  
 DR EMBL, X02955; CA36701.1; -; Genomic\_DNA.  
 DR EMBL, M27318; AA52726.1; -; mRNA.  
 DR EMBL, BC074965; AAH74965.1; -; mRNA.  
 DR EMBL, BC074966; AAH74966.1; -; mRNA.  
 DR PIR, E23753; IVH04B.  
 DR PIR, I52347; I52347.  
 DR HSSP, P01563; I1TF.  
 DR SRR, P05014; 24-189.  
 DR Ensembl, ENSG00000147877; Homo sapiens.  
 DR HGNC, HGNC:5425; IFNA4.  
 DR MIM, 147564; -.  
 DR GO, GO:0005132; P:interferon-alpha/beta receptor binding; TAS.  
 DR GO, GO:0009615; P:response to virus; TAS.  
 DR InterPro, IPR000471; Interferon\_abd.  
 DR PANTHER, PTHR11691; Interferon\_abd; 1.  
 DR Pfam, PF00143; Interferon; 1.  
 DR PRINTS, PR00266; INTERFERONAB.  
 DR SMART, SM00076; IFabd; 1.  
 DR PROSITE, PS00252; INTERFERON\_A\_B\_D; 1.  
 DR Antiviral defense; Cytokine; Direct protein sequencing;  
 DR Multigene family; Polymorphism; Signal.  
 KM SIGNAL 1 23  
 FT CHAIN 24 189 Interferon alpha-4.  
 FT DISULFID 24 132 By similarity.  
 FT DISULFID 52 162 By similarity.  
 FT VARIANT 74 74 A->T (in alpha-4b; dbSNP:1062571).  
 FT VARIANT 137 137 E->V (in alpha-4b; dbSNP:3750480).  
 FT /FTID=VAR 013002.  
 FT /FTID=VAR 013003.  
 SEQUENCE 189 AA; 21808 MW; 828DF9C33ABC337F CRC64;

Query Match 84.9%; Score 830; DB 1; Length 189;  
 Best Local Similarity 83.6%; Pred. No. 7.5e-64;  
 Matches 158; Conservative 18; Mismatches 13; Indels 0; Gaps 0;  
 QY 1 MALPFLVLMALVAVNCKSGICGLDLPOTHSLSNRRRTIMIAQMGRI5PFCIXDRHDFG 60  
 DB 1 MALPFLVLMALVAVNCKSGICGLDLPOTHSLSNRRRTIMIAQMGRI5PFCIXDRHDFG 60  
 QY 61 FPOEFPDGNQFOKAQAI5VLHEMIQOTFNLFSTYDSSATWDETLDKRYTELQOINDLE 120  
 DB 61 FPOEFPDGNQFOKAQAI5VLHEMIQOTFNLFSTYDSSATWDETLDKRYTELQOINDLE 120  
 QY 121 ACNMQEVEGVEDTPLMNVDSILTVKRYFORITLYLTKKYSFCAMEVVAEIMR5P5LSAN 180  
 DB 121 ACNMQEVEGVEDTPLMNVDSILTVKRYFORITLYLTKKYSFCAMEVVAEIMR5P5LSAN 180  
 QY 181 LQERLRKKE 189  
 DB 181 LQERLRKKE 189

RESULT 11  
 OSV15 HUMAN PRELIMINARY; PRT; 189 AA.  
 ID OSV15 HUMAN PRELIMINARY; PRT; 189 AA.  
 AC OSV15  
 DT 01-FEB-2005 (TREMBLrel. 29, Created)  
 DT 01-FEB-2005 (TREMBLrel. 29, Last sequence update)  
 DT 01-FEB-2005 (TREMBLrel. 29, Last annotation update)  
 DE Interferon, alpha 4.  
 GN Name=IFNA4; ORFNames=RP11-1P8.4-001;  
 OS Homo sapiens (Human).  
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
 OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominoidea;  
 OC Homo.  
 OX NCBI\_TaxID=9606;  
 RN [1]  
 RP NUCLEOTIDE SEQUENCE.  
 RA Pelan S.;  
 RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.  
 CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
 DR EMBL, AL512606; CAH71188.1; -; Genomic\_DNA.  
 DR SRR, OSV15; 24-189.  
 DR Ensembl, ENSG00000147877; Homo sapiens.  
 DR GO, GO:0005615; C:extracellular space; IEA.  
 DR GO, GO:0005126; F:hematopoietin/interferon-c1aas (D200-domain. . .); IEA.  
 DR GO, GO:0009615; P:defense response; IEA.  
 DR GO, GO:0009615; P:response to virus; IEA.  
 DR InterPro, IPR000471; Interferon\_abd.  
 DR Pfam, PF00143; Interferon; 1.  
 DR PRINTS, PR00266; INTERFERONAB.  
 DR ProDom, P0000550; Interferon\_abd; 1.  
 DR SMART, SM00076; IFabd; 1.  
 DR PROSITE, PS00252; INTERFERON\_A\_B\_D; 1.  
 KM Antiviral defense; Cytokine.  
 SQ SEQUENCE 189 AA; 21808 MW; 828DF9C33ABC337F CRC64;  
 Query Match 84.9%; Score 830; DB 2; Length 189;  
 Best Local Similarity 83.6%; Pred. No. 7.5e-64;  
 Matches 158; Conservative 18; Mismatches 13; Indels 0; Gaps 0;  
 QY 1 MALPFLVLMALVAVNCKSGICGLDLPOTHSLSNRRRTIMIAQMGRI5PFCIXDRHDFG 60  
 DB 1 MALPFLVLMALVAVNCKSGICGLDLPOTHSLSNRRRTIMIAQMGRI5PFCIXDRHDFG 60  
 QY 61 FPOEFPDGNQFOKAQAI5VLHEMIQOTFNLFSTYDSSATWDETLDKRYTELQOINDLE 120  
 DB 61 FPOEFPDGNQFOKAQAI5VLHEMIQOTFNLFSTYDSSATWDETLDKRYTELQOINDLE 120  
 QY 121 ACNMQEVEGVEDTPLMNVDSILTVKRYFORITLYLTKKYSFCAMEVVAEIMR5P5LSAN 180  
 DB 121 ACNMQEVEGVEDTPLMNVDSILTVKRYFORITLYLTKKYSFCAMEVVAEIMR5P5LSAN 180

OY 181 LOERLRKE 189  
DB 181 LOKRLRKO 189

## RESULT 12

O14608 HUMAN  
ID O14608\_HUMAN PRELIMINARY; PRT; 181 AA.  
AC O14608;  
DT 01-NOV-1996 (TrEMBLrel. 01, Created)  
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)  
DT 01-MAR-2004 (TrEMBLrel. 26, Last annotation update)  
DE Leukocyte interferon-alpha.  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
OC Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=85056523; PubMed=6548765;  
RA Gren E., Berzin V.M., Jansone I., Tsimanis A., Vishnevsky Y.,  
RA Apsalons U.;  
RT "Novel human leukocyte interferon subtype and structural comparison of  
RT alpha interferon genes";  
RL J. Interferon Res. 4:609-617 (1984).  
RN [2]  
RP NUCLEOTIDE SEQUENCE.  
RX PubMed=3803589;  
RA Ohara O., Terzoka H.;  
RT "Anomalous behavior of human leukocyte interferon subtypes on  
RT polyacrylamide gel electrophoresis in the presence of dodecyl  
RT sulfate.";  
RL FEBS Lett. 211:78-82 (1987).  
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).  
DR EMBL: M28586; AAA36041.1; -; mRNA.  
DR PIR: E25843; E25843.  
DR PIR: I56313; I56313.  
DR HSSP: P01563; 11TF.  
DR SMR: Q14608; 16-11F.  
DR GO: GO:0005615; C:extracellular space; IEA.  
DR GO: GO:0005126; F:hematopoietin/interferon-class (D200-domain. . .; IEA.  
DR GO: GO:0006952; P:defense response; IEA.  
DR GO: GO:0009615; P:response to virus; IEA.  
DR InterPro: IPR004711; Interferon\_abd.  
DR Pfam: PF00143; Interferon\_1.  
DR PRINTS: PR00266; INTERFERONAB.  
DR ProDom: PD000550; Interferon\_abd\_1.  
DR SMART: SM00076; IFabd\_1.  
DR PROSITE: PS00252; INTERFERON\_A\_B\_D\_1.  
DR Antiviral defense; Cytokine.  
SQ SEQUENCE 181 AA; 20878 MW; 3DB45120764EBABC CRC64;

Query Match 84.8%; Score 829; DB 2; Length 181;  
Best Local Similarity 87.3%; Pred. No. 8,7e-64;  
Matches 158; Conservative 14; Mismatches 9; Indels 0; Gaps 0;

OY 9 MALVIANCKSLCSLGLCDLPQTHSLNRRITLMIMAGMGRISPPSCDKDRHDFGFPQEEFDG 68  
DB 1 MAVLVLSYKSLCSLGLCDLPQTHSLNRRITLMIMAGMGRISPPSCDKDRHDFGFPQEEFDG 60  
OY 69 NOFORQAQIAIVLHEMIQOTFNLFSTKDSGATWDETLIDKPYETLYQQLNDLEACMQQVYG 128  
DB 61 NOFORQAQIAIVLHEMIQOTFNLFSTKDSGATWOSLLEKFTSLNQQLNDLEACVIOEYVG 120  
OY 129 VEDTFLMNVDSITLTARKYFORITLVLTCKKSPCAMEVVRATIMSFSLANLQRLRRK 188  
DB 121 VETPELMNVDSITLVAKRTFIRITLVLTCKKSPCAMEVVRATIMSFSLSKTFQERLRK 180  
OY 189 E 189  
DB 181 E 181

## RESULT 13

IFNA1 HUMAN  
ID IFNA1\_HUMAN STANDARD; PRT; 189 AA.  
AC P01562; O14605; Q9UMUJ3;  
DT 21-JUL-1986 (Rel. 01, Created)  
DT 21-JUL-1986 (Rel. 01, Last sequence update)  
DT 10-MAY-2005 (Rel. 47, Last annotation update)  
DE Interferon alpha-1/13 precursor (Interferon alpha-D) (LeIF D).  
GN Name=IFNA1;  
GN and  
GN Name=IFNA13;  
OS Homo sapiens (Human).  
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;  
OC Homo.  
OX NCBI\_TaxID=9606;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=81005094; PubMed=6157600; DOI=10.1016/0378-1119(80)90137-7;  
RA Mantel N., Schwarzelein M., Streuli M., Panem S., Nagata S.,  
RA Weisemann C.;  
RT "The nucleotide sequence of a cloned human leukocyte interferon  
RT cDNA.";  
RL Gene 10:1-10 (1980).  
RN [2]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=80254543; PubMed=6157095;  
RA Taniguchi T., Mantel N., Schwarzelein M., Nagata S., Muramatsu M.,  
RA Weisemann C.;  
RT "Human leukocyte and fibroblast interferons are structurally  
RT related";  
RL Nature 285:547-549 (1980).  
RN [3]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=81148795; PubMed=6163083;  
RA Goeddel D.V., Leung D.W., Dull T.J., Gross M., Lawn R.M.,  
RA McCandlish R., Seeburg P.H., Ullrich A., Yelverton E., Gray P.W.;  
RT "The structure of eight distinct cloned human leukocyte interferon  
RT cDNAs.";  
RL Nature 290:20-26 (1981).  
RN [4]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=85003592; PubMed=6479148;  
RA Todokoro K., Kiousis D., Weisemann C.;  
RT "Two non-allelic human interferon alpha genes with identical coding  
RT regions.";  
RL EMBO J. 3:1809-1812 (1984).  
RN [5]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=86037205; PubMed=4057246;  
RA Henko K., Brosius J., Fujisawa A., Fujisawa J.-I., Haynes J.R.,  
RA Hochstadt J., Kovacic T., Pasek M., Schamboeck A., Schmid J.,  
RA Todokoro K., Waelchli M., Nagata S., Weisemann C.;  
RT "Structural relationship of human interferon alpha genes and  
RT pseudogenes.";  
RL J. Mol. Biol. 185:227-260 (1985).  
RN [6]  
RP NUCLEOTIDE SEQUENCE.  
RX PubMed=2985969;  
RA Capon D.J., Shepard H.M., Goeddel D.V.;  
RT "Two distinct families of human and bovine interferon-alpha genes are  
RT coordinately expressed and encode functional polypeptides.";  
RL Mol. Cell. Biol. 5:768-779 (1985).  
RN [7]  
RP NUCLEOTIDE SEQUENCE.  
RA Roestcke N.;  
RT Submitted (DEC-1993) to the EMBL/GenBank/DBJ databases.  
RN [8]  
RP NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].  
RX PubMed=15164053; DOI=10.1038/nature02465;  
RA Humphrey S.J., Oliver K., Hunt A.R., Plumb R.W., Loveland J.E.,  
RA Howe K.L., Andrews T.D., Searle S., Hunt S.E., Scott C.E., Jones M.C.,

RA Ainscough R., Almeida J.P., Ambrose K.D., Ashwell R.I.S.,  
 RA Babbage A.K., Babbage S., Bagatell C.L., Bailey J., Banerjee R.,  
 RA Barber D.J., Barlow K.F., Bates K., Beasley G., Bird C.P.,  
 RA Bray-Alten S., Brown A.J., Brown J.Y., Burford D., Buttrill W.,  
 RA Burton C., Carter C., Carter N.P., Chapman J.C., Chen Y., Clarke G.,  
 RA Clark S.Y., Clee C.M., Clegg S., Collier R.E., Corby N., Crozier M.,  
 RA Cummings A.T., Davies J., Dhama P., Dunn M., Dutta I., Dyer L.W.,  
 RA Bartholomew M.E., Faulkner L., Fleming C.J., Frankish A.,  
 RA Frankland J.A., French L., Fricke D.G., Garner P., Garnett J.,  
 RA Ghori J., Gilbert J.G.R., Gibson C., Graham D.V., Gribble S.,  
 RA Griffiths C., Griffiths-Jones S., Grocock R., Guy J., Hall R.E.,  
 RA Hammond S., Harley J.L., Harrison E.S.I., Hart E.A., Heath P.D.,  
 RA Henderson C.D., Hopkins B.L., Howard P.J., Howden P.J., Huckle E.,  
 RA Johnson C., Johnson D., Joy A.A., Kay M., Keenan S., Kershaw J.K.,  
 RA Kimberley A.M., King A., Knights A., Laird G.K., Langford C.,  
 RA Lawlor S., Leongamornlert D.A., Leversha M., Lloyd C., Lloyd D.M.,  
 RA Lovell J., Martin S., Mashreghi-Mohammadi M., Matthews L., McLaren S.,  
 RA McLay K.E., McMurray A., Milne S., Nickerson T., Nisbett J.,  
 RA Nordisiek G., Pearce A.V., Peck A.I., Porter K.M., Pandian R.,  
 RA Pelen S., Phillimore B., Povey S., Ramsey Y., Rand V., Scharfe M.,  
 RA Sehra H.K., Showkhen R., Sims S.K., Skuce C.D., Smith M.,  
 RA Steward C.A., Swabreck D., Sycamore N., Teeter J., Thorpe A.,  
 RA Tracey A., Thomas A., Thomas D.W., Wall M., Wallis J., West A.P.,  
 RA Whitehead S.L., Willey D.L., Williams S.A., Wilming L., Wray P.W.,  
 RA Young L., Ashurst J.L., Coulson A., Blocker H., Durbin R.,  
 RA Sulston J.E., Hubbard T., Jackson M.J., Bentley D.R., Beck S.,  
 RA Rogers J., Dunham I.,  
 RA "DNA sequence and analysis of human chromosome 9,"  
 RA Nature 429:369-374(2004).  
 [9]  
 RP NUCLEOTIDE SEQUENCE [LARGE SCALE MRNA].  
 RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;  
 RA Struhsberg R.L., Felting E.A., Grouse L.H., Derge J.G.,  
 RA Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,  
 RA Altschul S.F., Zeeberg B., Buecaw K.H., Schaefer C.P., Bat N.K.,  
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,  
 RA Diachenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,  
 RA Stapleton M., Soares M.B., Donald M.F., Casavant T.L., Scheetz T.E.,  
 RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Pange C.,  
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullihy S.J.,  
 RA Bosak S.A., Mesman P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,  
 RA Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Huijck S.W.,  
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,  
 RA Fahy J., Helton E., Kettelman M., Madan A., Rodrigues S., Sanchez A.,  
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,  
 RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,  
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,  
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalska U., Smalins D.E.,  
 RA Scherch A., Schein J.E., Jones S.J.M., Marra M.A.,  
 RA "Generation and initial analysis of more than 15,000 full-length human  
 RT and mouse cDNA sequences,"  
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).  
 RP NUCLEOTIDE SEQUENCE OF 24-189.  
 RX MEDLINE=8329241; PubMed=6310510;  
 RA Weber H., Weissmann C.,  
 RT "Formation of genes coding for hybrid proteins by recombination  
 RT between related, cloned genes in E. coli,"  
 RL Nucleic Acids Res. 11:5661-5669(1983).  
 RP PROTEIN SEQUENCE OF 24-58.  
 RX MEDLINE=98087498; PubMed=9425112;  
 RA Nyman T.A., Toole H., Parkinen J., Kalkkinen N.,  
 RT "Identification of nine interferon-alpha subtypes produced by Sendai  
 RT virus-induced human peripheral blood leucocytes,"  
 RL Biochem. J. 329:295-302(1998).  
 [12]  
 RP POLYMORPHISM.  
 RX MEDLINE=20485144; PubMed=11032395; DOI=10.1089/10799900050151021;  
 RA Hussein M., Ni D., Gill D., Liao M.-U.,  
 RT "IFN-alpha-1a gene is the major variant in the North American  
 RT population,"  
 RL J. Interferon Cytokine Res. 20:763-768(2000).

CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral  
 CC activities. Interferon stimulates the production of two enzymes: a  
 CC protein kinase and an oligoadenylate synthetase.  
 CC -1- SUBCELLULAR LOCATION: Secreted.  
 CC -1- POLYMORPHISM: Two forms exist; alpha-1a (shown here) and alpha-1b.  
 CC -1- MISCELLANEOUS: Interferons alpha-1 and alpha-13 have identical  
 CC protein sequences.  
 CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.  
 CC  
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 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -  
 CC the European Bioinformatics Institute. There are no restrictions on its  
 CC use as long as its content is in no way modified and this statement is not  
 CC removed.  
 CC  
 DR EMBL, J00210; AAB59403.1; -; Genomic DNA.  
 DR EMBL, V00537; CA23798.1; -; mRNA.  
 DR EMBL, V00538; CA23799.1; -; mRNA.  
 DR EMBL, X75934; CA53538.1; -; Genomic DNA.  
 DR EMBL, AL353732; CAH72904.1; -; Genomic DNA.  
 DR EMBL, BC069427; AAH69427.1; -; mRNA.  
 DR EMBL, BC074928; AAH74928.1; -; mRNA.  
 DR EMBL, BC074929; AAH74929.1; -; mRNA.  
 DR EMBL, M29884; AA52714.1; -; Genomic DNA.  
 DR EMBL, X00803; CA25381.1; -; Genomic DNA.  
 DR PIR, C3285; IYHUA1.  
 DR HSP, P01563; IYRF.  
 DR SMR, P01562; 24-189.  
 DR Ensembl, ENSG00000147885; Homo sapiens.  
 DR HGNC, HGNC:5417; IFNA1.  
 DR HGNC, HGNC:5419; IFNA13.  
 DR MIM, 147660; -.  
 DR MIM, 147578; -.  
 DR GO, GO:0005132; F:Interferon-alpha/beta receptor binding; TAS.  
 DR InterPro, IPR000471; Interferon abd.  
 DR PANTHER, PTHR11691; Interferon\_abd; 1.  
 DR Pfam, PF00143; Interferon; 1.  
 DR PRINTS, PR00266; INTERFERONAB.  
 DR Prodom, PD000550; INTERFERONAB.  
 DR PROSITE, PS00252; INTERFERON\_A\_B\_D; 1.  
 DR Antiviral defense; Cytokine; Direct protein sequencing;  
 KW Multigene family; Polymorphism; Signal.  
 FT SIGNAL 1 23  
 FT CHAIN 1 189 Interferon alpha-1/13.  
 FT DISULFID 24 122 By similarity.  
 FT DISULFID 52 162 By similarity.  
 FT VARIANT 137 137 A -> V (in alpha-1b; dbSNP:2230050).  
 FT CONFLICT 10 10 /Ftd=VAR\_013000.  
 FT FT V -> A (in Ref. 7).  
 SQ SEQUENCE 189 AA; 21725 MW; F32F9CB969606B69 CRC64;  
 Query Match 84.7%; Score 828; DB 1; Length 189;  
 Best Local Similarity 84.1%; Pred. No. 1,1e-63;  
 Matches 159; Conservative 10; Mismatches 20; Indels 0; Gaps 0;  
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 DB 1 MASPPALMALVNLVNSCKSSCSICDLPETHSLDNRRITMLAAGSRISPPSCIDMRHDFG 60  
 QY 61 FPOEFDPNQFOKAQALSVLHEMIQOTFNLFSYDSSATWDETLLDKFTYELVQQLNDLE 120  
 DB 61 FPOEFDPNQFOKAQALSVLHEMIQOTFNLFSYDSSATWDETLLDKFTYELVQQLNDLE 120  
 QY 121 ACMQGVVEVDTPMLNVDSITLVKRYFPRITLYLTEKYSFCAMVEVVAEIMRSLSLAN 180  
 DB 121 ACVMQGVVEVDTPMLNVDSITLVKRYFPRITLYLTEKYSFCAMVEVVAEIMRSLSLAN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

RESULT 14

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05VYQ2 HUMAN
ID 05VYQ2 HUMAN PRELIMINARY; PRT; 189 AA.
AC 05VYQ2
DT 01-FEB-2005 (TrEMBLrel. 29, Created)
DT 01-FEB-2005 (TrEMBLrel. 29, Last sequence update)
DE Interferon, alpha 1.
GN Name=IFNA1; ORFNames=RP11-354P17.1-001;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RA Beasley H.;
RL Submitted (MAY-2005) to the EMBL/GenBank/DBJ databases.
CC -1- SUBCELLULAR LOCATION: Secreted (By similarity).
DR EMBL: AL353732; CAH72911.1; -; Genomic_DNA.
DR SMR: 05VYQ2: 24-189.
DR GO: GO:0005576; C:extracellular region; IEA.
DR GO: GO:0005126; P:hematopoietin/interferon-class (D200-domain. . .; IEA.
DR GO: GO:0006952; P:defense response; IEA.
DR InterPro: IPR000471; Interferon_abd.
DR Pfam: PF00143; Interferon_1.
DR PRINTS: PR00266; INTERFERONAB.
DR SMART: SM00076; IFabd; 1.
DR PROSITE: PS00252; INTERFERON_A-B_D; 1.
KW Antiviral defense; Cytokine.
SQ SEQUENCE 189 AA; 21725 MW; F32F9CB969606B69 CRC64;

Query March 84.7%; Score 828; DB 2; Length 189;
Best Local Similarity 84.1%; Pred. No. 1,le-63;
Matches 159; Conservative 10; Mismatches 20; Indels 0; Gaps 0;

QY 1 MALPFLMALVLMVKNCKSICSGCDLPQTHSLNRRTLMVAMQGRISPFSCLEKDRHDFG 60
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QY 61 PPOEFPDNGFOKQAQAIISVHEMIQQTFNLFSTYSSATWDETLIDKFTYELVQDLNLE 120
DQ 61 PPOEFPDNGFOKQAQAIISVHEMIQQTFNLFSTYSSATWDETLIDKFTYELVQDLNLE 120
QY 121 ACMMQGVGVETPLMNDLSITLVKRYRQRTILYITEKKYSCAMVYRAETMBSFSLSAN 180
DQ 121 ACMMQGVGVETPLMNDLSITLVKRYRQRTILYITEKKYSCAMVYRAETMBSFSLSAN 180
QY 181 LOERLRKKE 189
DQ 181 LOERLRKKE 189
QY 181 LOERLRKKE 189
DQ 181 LOERLRKKE 189

RESULT 15
IFNA1 HUMAN STANDARD; PRT; 189 AA.
ID IFNA1 HUMAN STANDARD; PRT; 189 AA.
AC P01571; Q14639;
DT 21-JUL-1986 (Rel. 01, Created)
DT 01-OCT-1994 (Rel. 30, Last sequence update)
DT 13-SEP-2005 (Rel. 48, Last annotation update)
DE Interferon alpha-17 precursor (Interferon alpha-1') (Interferon alpha-
T) (Interferon alpha-88).
GN Name=IFNA17;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Homnidae;
OC Homo.
OX NCBI_TaxID=9606;
RN [1]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=81201124; PubMed=6165082;
RA Lawn R.M., Adelman J., Dull T.J., Gross M., Goeddel D.V., Ullrich A.;
RT "DNA sequence of two closely linked human leukocyte interferon
genes.";

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RL Science 212:1159-1162(1981).
RN [2]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=85229953; PubMed=3891272;
RA Mzougichi J., Pitha P.M., Raj N.B.K.;
RT "Efficient expression in Escherichia coli of two species of human
interferon-alpha and their hybrid molecules.";
RL DNA 4:221-232(1985).
RN [3]
RP NUCLEOTIDE SEQUENCE OF 14-189.
RX MEDLINE=85235859; PubMed=408999;
RA Lund B., von Gabain A., Edlund T., Ny T., Lundgren E.;
RT "Differential expression of interferon genes in a substrain of Namalva
cells.";
RL J. Interferon Res. 5:229-238(1985).
RN [4]
RP NUCLEOTIDE SEQUENCE.
RX MEDLINE=87024453; PubMed=3767336;
RA Savelliev V.I., Zlochevsky M.L., Sorokin A.V., Naroditskaya V.A.,
RA Bolotin A.P., Demanova N.G., Kozlov Y.I., Neznanov N.S.,
RA Gazaryan K.G., Monastyrskaya G.S., Sverdlov E.D.;
RT "[Cloning and the determination of the nucleotide sequences in 2 genes
of human leukocyte interferons].";
RL Antibiot. Med. Biotechnol. 31:592-596(1986).
RN [5]
RP PROTEIN SEQUENCE OF 24-58.
RX MEDLINE=88087498; PubMed=9425112;
RA Nyman T.A., Toeloe H., Parkkinen J., Kalkkinen N.;
RT "Identification of nine interferon-alpha subtypes produced by Sendai
virus-induced human peripheral blood leucocytes.";
RL Biochem. J. 329:295-302(1998).
RN [6]
RP NUCLEOTIDE SEQUENCE OF 24-56.
RX MEDLINE=92340576; PubMed=1634550;
RA Zoon K.C., Miller D., Bekisz J., zur Nedden D., Enterline J.C.,
RA Nguyen N.Y., Hu R.O.;
RT "Purification and characterization of multiple components of human
lymphoblastoid interferon-alpha.";
RL J. Biol. Chem. 267:15210-15216(1992).
RN [7]
RP VARIANT ARG-184.
RX MEDLINE=98376207; PubMed=9712362;
RA Hussain M., Tan T., Ni D., Gill D.S., Liao M.-J.;
RT "A new allele of interferon-alpha17 gene encoding IFN-alpha17b is the
major variant in human population.";
RL J. Interferon Cytokine Res. 18:469-477(1998).
CC -1- FUNCTION: Produced by macrophages, IFN-alpha have antiviral
activities. Interferon stimulates the production of two enzymes: a
protein kinase and an oligoadenylate synthetase.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the alpha/beta interferon family.
CC This Swiss-Prot entry is copyright. It is produced through a collaboration
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use as long as its content is in no way modified and this statement is not
removed.
CC -----
EMBL: M11026; AAAS2725.1; -; mRNA.
EMBL: V00532; CAA23793.1; -; Genomic_DNA.
EMBL: M38289; AAAS9165.1; -; mRNA.
EMBL: M71246; AAAS2713.1; -; mRNA.
PIR: A01935; IYVDA9.
PIR: I56314; I56314.
HSSP: P01571; 24-189.
SMR: P01571; 24-189.
DR EMBL: ENSG00000186809; Homo sapiens.
DR HGNC: HGNC:5422; IFNA17.
DR MIM: 147583; -.
DR GO: GO:0005132; P:interferon-alpha/beta receptor binding; TAS.
DR GO: GO:0009615; P:response to virus; TAS.
DR InterPro: IPR000471; Interferon_abd.
DR PANTHER: PTHR11691; Interferon_abd; 1.

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DR Pfam: PF00143; Interferon; 1.  
DR PRINTS: PR00266; INTERFERONAB.  
DR PRODOM: PD000550; Interferon abd; 1.  
DR PROSITE: PS00252; INTERFERON\_A\_B\_D; 1.  
KW Antiviral defense; Cytokine; Direct protein sequencing;  
KW Multigene family; Polymorphism; Signal.  
FT SIGNAL 1 23  
FT CHAIN 24 189 Interferon alpha-17.  
FT DISULFID 24 122 By similarity.  
FT DISULFID 52 162 By similarity.  
FT VARIANT 184 184 I -> R (in dbSNP:9298814).  
FT CONFLICT 57 57 /FTId=VAR\_013020.  
FT CONFLICT 78 78 H -> P (in Ref. 1).  
FT CONFLICT 78 78 S -> P (in Ref. 3).  
SQ SEQUENCE 189 AA; 21728 MW; 0448EAEAB9D7FC32 CRC64;

Query Match 83.9%; Score 821; DB 1; Length 189;  
Best Local Similarity 82.5%; Pred. No. 4,5e-63;  
Matches 156; Conservative 18; Mismatches 15; Indels 0; Gaps 0;

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DB 1 MALSFSLMAVLYLSYKSTICSLGCDLPQTHSLGNRRALILAQMGRISSPFGCLKDRHDFG 60  
QY 61 FPOEFDFGNQFOKAQAI SYLHEMIOQTFVLFTKDSATWDETLIDKFFYTELYOOLNDE 120  
DB 61 LPQEFDFGNQFOKTOAISVLHEMIOQTFVLFTEDSSAAWESLLEKSTELIYOOLNDE 120  
QY 121 ACMQGEVGEVDTPLANNVDSILTVRKYPORITLYLTEKKYSPCAMEVVRAEIWRSFSLAN 180  
DB 121 ACVIOEGVGEETPLANNEDSILAVRKYPORITLYLTEKKYSPCAMEVVRAEIWRSLSPSTN 180  
QY 181 LOERLRKE 189  
DB 181 LQKILRRKD 189

Search completed: December 15, 2005, 13:01:52  
Job time : 232 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 15, 2005, 12:54:29 ; Search time 38 Seconds

(without alignments)  
478.552 Million cell updates/sec

Title: US-10-698-402-2

Perfect score: 978

Sequence: 1 MALPFVLLMALVVLNCKSIC.....EIMRSPSLANLQERLRKE 189

Scoring table:

BIOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

1: PIR 80:.\*  
2: PIR1:.\*  
3: PIR3:.\*  
4: PIR4:.\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	978	100.0	189	1	IVHUA7
2	853	87.2	189	2	interferon alpha-5
3	851	87.0	189	1	interferon-alpha-F
4	846	86.5	167	2	interferon alpha-I
5	845	86.4	189	1	interferon alpha-G
6	838	85.7	189	1	interferon alpha-I
7	832	85.1	189	1	interferon alpha-I
8	830	84.9	189	2	interferon alpha-M
9	829	84.8	181	2	interferon alpha-2
10	828	84.7	189	1	interferon alpha-1
11	824	84.3	189	2	interferon precurs
12	820	83.8	189	1	interferon alpha-5
13	811	82.9	189	1	interferon alpha-1
14	806.5	82.5	188	1	interferon alpha-2
15	805	82.3	189	1	interferon alpha-1
16	805	82.3	189	2	interferon alpha-1
17	795	81.3	189	2	interferon alpha-7
18	794	81.2	189	2	interferon alpha-7
19	790	80.8	176	2	IFN-alpha-N-protei
20	778	79.6	189	1	interferon alpha-1
21	773	79.0	167	2	interferon alpha-1
22	755	77.2	189	1	interferon alpha-4
23	742	75.9	184	1	interferon alpha-1
24	738	75.5	184	1	interferon alpha-1
25	736	75.3	184	1	interferon alpha-1
26	730	74.6	184	1	interferon alpha-1
27	728.5	74.5	165	2	alpha 2 interferon
28	727	74.3	167	2	interferon alpha-J
29	691	70.7	162	2	interferon alpha-B

30	670	68.5	189	2	S23709	interferon alpha-1
31	625	63.9	189	1	IVBOIB	interferon alpha-I
32	624	63.8	189	1	IVBOID	interferon alpha-I
33	619	63.3	189	1	IVBOIC	interferon alpha-I
34	616	62.0	189	1	IVBOIA	interferon alpha-I
35	606	62.0	189	1	IVMSA1	interferon alpha-I
36	601	61.5	189	1	IVMSA5	interferon alpha-I
37	599	61.2	189	1	IVMSA1	interferon alpha-I
38	596	60.9	190	2	A24401	interferon alpha-1
39	590	60.3	190	2	I49774	alpha-interferon -
40	583	59.6	190	2	IVRTAI	interferon alpha-I
41	578	59.1	190	1	IVMSA2	interferon alpha-2
42	577	59.0	190	2	I49772	interferon alpha-7
43	570	58.3	190	2	I49775	interferon alpha-B
44	565	57.8	190	2	JH0468	interferon alpha-1
45	556	56.9	189	1	IVMSA6	interferon alpha-1

#### ALIGNMENTS

##### RESULT 1

IVHUA7

interferon alpha-5 precursor - human

N:Alternate names: interferon alpha-G

C:Species: Homo sapiens (man)

C>Date: 01-Sep-1981 #sequence\_revision 29-Jan-1999 #text\_change 09-Jul-2004

C:Accession: S43716; A01833

R:Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov

J. Mol. Biol. 185, 227-260, 1985

A:Title: Structural relationship of human interferon alpha genes and pseudogenes.

A:Reference number: A92916; MUID:86037205; PMID:4057246

A:Accession: S43716

A:Molecule type: DNA

A:Residues: 1-189 <HEN>

A:Cross-references: UNIPROT:P01569; UNIPARC:UPI0000047760; EMBL:X02956; NID:932659; PIDN

R:Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg

Nature 290, 20-26, 1981

A:Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.

A:Reference number: A93249; MUID:81148795; PMID:6163083

A:Molecule type: mRNA

A:Accession: A01833

A:Cross-references: UNIPARC:UPI0000141F4; GB:V00541; GB:J00213; NID:932718; PIDN:CAA238

A>Note: eight classes of interferon alpha clones were identified, this sequence is deriv

C:Genetics:

A:Gene: GDB:IFNA5

A:Cross-references: GDB:136362; OMIM:147565

A:Map position: 9p22-9p22

C:Superfamily: interferon alpha

C:Keywords: antiviral; cytokine; leukocyte

F:1-23/Domain: signal sequence #status Predicted <SIG>

F:24-189/Product: interferon alpha-5 #status predicted <MAT>

Query Match 100.0%; Score 978; DB 1; Length 189;

Best Local Similarity 100.0%; Pred. No. 7.8e-82; Indels 0; Gaps 0;

Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY	1	MALPFVLLMALVVLNCKSICSLGCDLPQTHSLNRRITLMTAQMGRISPSFGLKDRHDFG	60
DB	1	MALPFVLLMALVVLNCKSICSLGCDLPQTHSLNRRITLMTAQMGRISPSFGLKDRHDFG	60
QY	61	PPQEPFGNQFOKQOASVHEMIQQTFNLFSTQSSATWDETLDDKFFTYLTYQOINDLE	120
DB	61	PPQEPFGNQFOKQOASVHEMIQQTFNLFSTQSSATWDETLDDKFFTYLTYQOINDLE	120
QY	121	ACMQQEVGEDEPTPLMNDLSITLVKRYFORITLVYLYTEKYSPCAMQVRAEIMRSPSLSAN	180
DB	121	ACMQQEVGEDEPTPLMNDLSITLVKRYFORITLVYLYTEKYSPCAMQVRAEIMRSPSLSAN	180
QY	181	LOERLRKE 189	
DB	181	LOERLRKE 189	



## RESULT 2

Interferon-alpha-F - human  
C:Species: Homo sapiens (man)  
C:Date: 02-Aug-1996 #sequence\_revision 02-Aug-1996 #text\_change 09-Jul-2004  
C:Accession: I84464; I37583  
R:Gren, B.Y.; Berzlin, V.M.; Tsimanis, A.Y.; Apsalou, U.R.; Vishnevskii, Y.I.; Yanson, I.A.; Lozna, V.P.; Kavanan, V.M.; Efimov, V.A.; Sverdlov, E.D.  
D:J. Biochem. 269, 91-95, 1983  
A:Title: A new type of leukocytic interferon.  
A:Reference number: 137583  
A:Accession: I84464  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-189 <RES>  
A:Cross-references: UNIPROT:P01568; UNIPARC:UPI000002C35A; GB:M12350; NID:G184598; PIDN:  
A:Accession: I37583  
A:Status: preliminary; translated from GB/EMBL/DBJ  
A:Molecule type: mRNA  
A:Residues: 1-189 <RES>  
A:Cross-references: UNIPARC:UPI000002C35A; EMBL:X00145; NID:G32724; PIDN:CAA24980.1; PID  
A:Gene: IFNA  
C:Superfamily: interferon alpha

Query Match 87.2%; Score 853; DB 2; Length 189;  
Best Local Similarity 86.8%; Pred. No. 1.9e-70;  
Matches 164; Conservative 14; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPFLVLMALVVLNCKSICSLGCDLPQTHSLSNRRITMIAOMGRISPSFCLXDRHDFG 60  
DB 1 MALPFLVLMALVVLNCKSICSLGCDLPQTHSLSNRRITMIAOMGRISPSFCLXDRHDFG 60  
QY 61 PPOSEFPGNQFOKQAISVLHEMIQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLE 120  
DB 61 PPOSEFPGNQFOKQAISVLHEMIQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLE 120  
QY 121 ACNMQEVEGVEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMWVRAEIMRSFSLSAN 180  
DB 121 ACNMQEVEGVEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMWVRAEIMRSFSLSKI 180  
QY 181 LOERLRKKE 189  
DB 181 LOERLRKKE 189

## RESULT 3

IVHUF

Interferon alpha-I-F precursor - human  
N:Alternate names: HuIFN-alpha-I-F; Leif F; type I interferon  
C:Species: Homo sapiens (man)  
C:Date: 01-Sep-1981 #sequence\_revision 01-Sep-1981 #text\_change 09-Jul-2004  
C:Accession: A01832  
R:Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg  
Nature 250, 20-26, 1981  
A:Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.  
A:Reference number: A93249; MUID:81148795; PMID:6163083  
A:Molecule type: mRNA  
A:Residues: 1-189 <GOE>  
A:Cross-references: UNIPROT:P01568; UNIPARC:UPI0000047762; GB:V00540; GB:J00212; NID:G32  
A:Note: eight classes of interferon alpha clones were identified; this sequence is deriv  
C:Gene: IFN1@  
A:Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C:Keywords: antiviral  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-I-F #status predicted <MAT>  
F:24-122,52-162/Diulfide bonds: #status predicted

Query Match 87.0%; Score 851; DB 1; Length 189;  
Best Local Similarity 86.2%; Pred. No. 2.9e-70;  
Matches 163; Conservative 15; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPFLVLMALVVLNCKSICSLGCDLPQTHSLSNRRITMIAOMGRISPSFCLXDRHDFG 60  
DB 1 MALPFLVLMALVVLNCKSICSLGCDLPQTHSLSNRRITMIAOMGRISPSFCLXDRHDFG 60  
QY 61 PPOSEFPGNQFOKQAISVLHEMIQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLE 120  
DB 61 PPOSEFPGNQFOKQAISVLHEMIQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLE 120  
QY 121 ACNMQEVEGVEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMWVRAEIMRSFSLSAN 180  
DB 121 ACNMQEVEGVEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMWVRAEIMRSFSLSKI 180  
QY 181 LOERLRKKE 189  
DB 181 LOERLRKKE 189

## RESULT 4

D25843

Interferon alpha-G - human  
N:Alternate names: human leukocyte interferon (IFN)  
C:Species: Homo sapiens (man)  
C:Date: 16-Aug-1988 #sequence\_revision 16-Aug-1988 #text\_change 15-Jun-1996  
C:Accession: D25843  
R:Ohara, O.; Teraoka, H.  
FEBS Lett. 211, 78-82, 1987  
A:Title: Anomalous behavior of human leukocyte interferon subtypes on polyacrylamide gel  
A:Reference number: A91374; MUID:87105954; PMID:3803589  
A:Status: nucleic acid sequence not shown; not compared with conceptual translation  
A:Residues: 1-167 <OHA>  
A:Cross-references: UNIPARC:UPI0000176717  
C:Superfamily: interferon alpha

Query Match 86.5%; Score 846; DB 2; Length 167;  
Best Local Similarity 98.8%; Pred. No. 7.1e-70;  
Matches 164; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 24 CDLPQTHSLSNRRITMIAOMGRISPSFCLXDRHDFGPOSEFPGNQFOKQAISVLHEM 83  
DB 2 CDLPQTHSLSNRRITMIAOMGRISPSFCLXDRHDFGPOSEFPGNQFOKQAISVLHEM 61  
QY 84 IQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLEACNMQEVEGVEDTPLMNVDSILTV 143  
DB 62 IQOTFNLFTSDSSATWDETLDDKFTYELVQQLNDLEACNMQEVEGVEDTPLMNVDSILTV 121  
QY 144 RKYFORITLYLTKKYSFCAMWVRAEIMRSFSLSANLOERLRKE 189  
DB 122 RKYFORITLYLTKKYSFCAMWVRAEIMRSFSLSANLOERLRKE 167

## RESULT 5

IVH014

Interferon alpha-I-14 precursor [validated] - human  
N:Alternate names: HuIFN-alpha-I-14; lambda-2-h; type I interferon  
C:Species: Homo sapiens (man)  
C:Date: 01-Sep-1981 #sequence\_revision 01-Sep-1981 #text\_change 09-Jul-2004  
C:Accession: A92916; A94255; B93249; PC2203; A01834; C23753  
R:Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov  
J. Mol. Biol. 185, 227-260, 1985  
A:Title: Structural relationship of human interferon alpha genes and pseudogenes.  
A:Reference number: A92916; MUID:86037205; PMID:4057246  
A:Accession: A92916  
A:Molecule type: DNA  
A:Residues: 1-189 <HEN>  
A:Cross-references: UNIPROT:P01570; UNIPARC:UPI00000541D5; GB:X02959; NID:G32650; PIDN:C  
R:Lawn, R.M.; Adelman, J.; Dull, T.J.; Gross, M.; Goeddel, D.; Ullrich, A.



Science 212, 1159-1162, 1981  
A:Title: DNA sequence of two closely linked human leukocyte interferon genes.  
A:Reference number: A94255; MUID:81201124; PMID:6165082  
A:Accession: A94255  
A:Molecule type: DNA  
A:Residues: 1-189 <LM>  
A:Cross-references: UNIPARC:UPI0000047764; GB:V00542; GB:J00214; NID:932635; PIDN:CAA237  
R:Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandlish, R.; Seeburg  
Nature 290, 20-26, 1981  
A:Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.  
A:Reference number: A93249; MUID:81148795; PMID:6163083  
A:Accession: B93249  
A:Molecule type: mRNA  
A:Residues: 1-174, 'F', 176-189 <GO>  
A:Cross-references: UNIPARC:UPI0000047764; GB:V00542; GB:J00214; NID:932720; PIDN:CAA238  
A:Note: a variant sequence differs from that shown in having 175-Phe, 182-Lys, and 184-C  
R:Shirono, H.; Koga, J.; Uemura, H.; Matsuo, A.  
Biocell. Biotechnol. Biochem. 58, 1714-1715, 1994  
A:Title: Identification of glycosylated subtypes of interferon-alpha produced by human 1  
F:24-122,52-162/Dissulfide bonds: #status predicted <SIG>  
F:25,95/Binding site: carbohydrate (Asn) (covalent) #status predicted  
Query Match 86.4%; Score 845; DB 1; Length 189;  
Best Local Similarity 84.7%; Pred. No. 1e-69;  
Matches 160; Conservative 16; Mismatches 13; Indels 0; Gaps 0;  
QY 1 MALPFVLLMALVNLVNCSSICSLGCDLPQTHSLNRRRTLMIAQMGRISSPSCCLKDRHDFG 60  
DB 1 MALPFALMALVNLVNCSSICSLGCDLPQTHSLNRRRTLMIAQMGRISSPSCCLKDRHDFG 60  
QY 61 PPOEEDGNGFOKQAQAI SVLHEMIQOTFNLFSYKSSATWDETLLDKFYTEL YQQLNDLE 120  
DB 61 PPOEEDGNGFOKQAQAI SVLHEMIQOTFNLFSYKSSATWDETLLDKFYTEL YQQLNDLE 120  
QY 121 ACMMQGVGVEDTPLMNVDSILTVRKYPORITLYLTKKYSPCAMEVVRATIMRSFSLSAN 180  
DB 121 ACMMQGVGVEDTPLMNVDSILTVRKYPORITLYLTKKYSPCAMEVVRATIMRSFSLSAN 180  
QY 181 LOERLRARKE 189  
DB 181 LOERLRARKE 189  
RESULT 6  
IVHU16  
Interferon alpha-I-6 precursor - human  
N:Alternate names: HuIFN-alpha-I-6; Ielf K; type I interferon  
C:Species: Homo sapiens (man)  
C:Date: 28-Dec-1987 #sequence\_revision 28-Dec-1987 #text\_change 09-Jul-2004  
C:Accession: A23753  
R:Henco, K.; Brocius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov  
J. Mol. Biol. 185, 227-260, 1985  
A:Title: Structural relationship of human interferon alpha genes and pseudogenes.  
A:Reference number: A92916; MUID:86037205; PMID:4057246  
A:Accession: A23753  
A:Molecule type: DNA  
A:Residues: 1-189 <H>  
A:Cross-references: UNIPROT:P05013; UNIPARC:UPI000004775F; GB:X02958; NID:932662; PIDN:C  
C:Genetics:

A:Gene: GDB:IFNA6  
A:Cross-references: GDB:136363; OMIM:147566  
A:Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C:Keywords: antiviral  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-I-6 #status predicted <MAT>  
F:24-122,52-162/Dissulfide bonds: #status predicted  
Query Match 85.7%; Score 838; DB 1; Length 189;  
Best Local Similarity 86.2%; Pred. No. 4.4e-69;  
Matches 163; Conservative 18; Mismatches 18; Indels 0; Gaps 0;  
QY 1 MALPFVLLMALVNLVNCSSICSLGCDLPQTHSLNRRRTLMIAQMGRISSPSCCLKDRHDFG 60  
DB 1 MALPFALMALVNLVNCSSICSLGCDLPQTHSLNRRRTLMIAQMGRISSPSCCLKDRHDFG 60  
QY 61 PPOEEDGNGFOKQAQAI SVLHEMIQOTFNLFSYKSSATWDETLLDKFYTEL YQQLNDLE 120  
DB 61 PPOEEDGNGFOKQAQAI SVLHEMIQOTFNLFSYKSSATWDETLLDKFYTEL YQQLNDLE 120  
QY 121 ACMMQGVGVEDTPLMNVDSILTVRKYPORITLYLTKKYSPCAMEVVRATIMRSFSLSAN 180  
DB 121 ACMMQGVGVEDTPLMNVDSILTVRKYPORITLYLTKKYSPCAMEVVRATIMRSFSLSAN 180  
QY 181 LOERLRARKE 189  
DB 181 LOERLRARKE 189  
RESULT 7  
IVHU18  
Interferon alpha-I-4b precursor - human  
N:Alternate names: HuIFN-alpha-I-4b; type I interferon  
C:Species: Homo sapiens (man)  
C:Date: 28-Dec-1987 #sequence\_revision 28-Dec-1987 #text\_change 09-Jul-2004  
C:Accession: B23753  
R:Henco, K.; Brocius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov  
J. Mol. Biol. 185, 227-260, 1985  
A:Title: Structural relationship of human interferon alpha genes and pseudogenes.  
A:Reference number: A92916; MUID:86037205; PMID:4057246  
A:Accession: B23753  
A:Molecule type: DNA  
A:Residues: 1-189 <H>  
A:Cross-references: UNIPROT:P05014; UNIPARC:UPI0000047761; GB:X02955; NID:932656; PIDN:C  
C:Genetics:  
A:Gene: GDB:IFNB  
A:Cross-references: GDB:119328; OMIM:147660  
A:Map position: 9p22-9p22  
C:Superfamily: interferon alpha  
C:Keywords: antiviral  
F:1-23/Domain: signal sequence #status predicted <SIG>  
F:24-189/Product: interferon alpha-I-4b #status predicted <MAT>  
F:24-122,52-162/Dissulfide bonds: #status predicted  
Query Match 85.1%; Score 832; DB 1; Length 189;  
Best Local Similarity 83.6%; Pred. No. 1.6e-69;  
Matches 158; Conservative 18; Mismatches 13; Indels 0; Gaps 0;  
QY 1 MALPFVLLMALVNLVNCSSICSLGCDLPQTHSLNRRRTLMIAQMGRISSPSCCLKDRHDFG 60  
DB 1 MALPFALMALVNLVNCSSICSLGCDLPQTHSLNRRRTLMIAQMGRISSPSCCLKDRHDFG 60  
QY 61 PPOEEDGNGFOKQAQAI SVLHEMIQOTFNLFSYKSSATWDETLLDKFYTEL YQQLNDLE 120  
DB 61 PPOEEDGNGFOKQAQAI SVLHEMIQOTFNLFSYKSSATWDETLLDKFYTEL YQQLNDLE 120  
QY 121 ACMMQGVGVEDTPLMNVDSILTVRKYPORITLYLTKKYSPCAMEVVRATIMRSFSLSAN 180  
DB 121 ACMMQGVGVEDTPLMNVDSILTVRKYPORITLYLTKKYSPCAMEVVRATIMRSFSLSAN 180  
QY 181 LOERLRARKE 189  
DB 181 LOERLRARKE 189

Db 181 LQKRLRRKD 189

RESULT 8

Interferon alpha-M1 precursor - human

C:Species: Homo sapiens (man)

C:Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 09-Jul-2004

C:Accession: 152347

R:Linman, A.W.; Bellinz, M.W.; Mcullen, G.L.; Macreadie, I.G.; Murphy, M.; Nisbet, I. Biochem. Int. 8, 725-732, 1984

A:Title: Nucleotide sequence and expression in E. coli of a human interferon-alpha gene

A:Reference number: 152347; PMID:84307815; PMID:6089830

A:Accession: 152347

A:Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: mRNA

A:Residues: 1-189 <RES>

A:Cross-references: UNIPROT:P05014; UNIPARC:UPI000002BA77; GB:M27318; NID:G184617; PIDN:A:Cross-references: UNIPROT:P05014; UNIPARC:UPI000002BA77; GB:M27318; NID:G184617; PIDN:A:Gene: IFNA

C:Superfamily: Interferon alpha

Query Match 84.9%; Score 830; DB 2; Length 189;

Best Local Similarity 83.6%; Pred. No. 2,4e-68;

Matches 158; Conservative 18; Mismatches 13; Indels 0; Gaps 0;

Qy 1 MALPVLVNLAVLNCKSLGCDLPOTHSLSNRRTIMAMQGRISPFGLKDRHDFG 60

Db 1 MALPVLVNLAVLNCKSLGCDLPOTHSLSNRRTIMAMQGRISPFGLKDRHDFG 60

Qy 61 PPOEFDDNQFOKAQAIISYLHEMIQOTFNLFTSKDSATWDETLDDKFEYELYOQLNLE 120

Db 61 PPOEFDDNQFOKAQAIISYLHEMIQOTFNLFTSKDSATWDETLDDKFEYELYOQLNLE 120

Qy 121 ACMEQVEGVEDTPLMNVDSILTVRKRYFORITLYLTKKYSFPCAMVEVRAEIMRSFSLSAN 180

Db 121 ACMEQVEGVEDTPLMNVDSILTVRKRYFORITLYLTKKYSFPCAMVEVRAEIMRSFSLSAN 180

Qy 121 ACMEQVEGVEDTPLMNVDSILTVRKRYFORITLYLTKKYSFPCAMVEVRAEIMRSFSLSAN 180

Db 121 ACMEQVEGVEDTPLMNVDSILTVRKRYFORITLYLTKKYSFPCAMVEVRAEIMRSFSLSAN 180

Qy 181 LOERLRKKE 189

Db 181 LQKRLRRKD 189

RESULT 9

Interferon alpha 21 - human

C:Species: Homo sapiens (man)

C:Date: 02-Jul-1996 #sequence\_revision 02-Jul-1996 #text\_change 09-Jul-2004

C:Accession: 156313

R:Green, B.; Berrin, V.M.; Jansone, I.; Tsilmanis, A.; Vlashevsky, Y.; Apsalons, U. J. Interferon Res. 4, 609-617, 1984

A:Title: Novel human leukocyte interferon subtype and structural comparison of alpha int

A:Reference number: 156313; PMID:85056523; PMID:6548765

A:Accession: 156313

A:Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: mRNA

A:Residues: 1-181 <RES>

A:Cross-references: UNIPROT:Q14608; UNIPARC:UPI00000687D8; GB:M28586; NID:G184636; PIDN:A:Cross-references: UNIPROT:Q14608; UNIPARC:UPI00000687D8; GB:M28586; NID:G184636; PIDN:A:Gene: IFNA21

A:Cross-references: GDB:136360; OMIM:147584

A:Map position: 9p22-9p22

C:Superfamily: Interferon alpha

Query Match 84.8%; Score 829; DB 2; Length 181;

Best Local Similarity 87.3%; Pred. No. 2,8e-68;

Matches 158; Conservative 14; Mismatches 9; Indels 0; Gaps 0;

Qy 9 MALVVLNCKSLGCDLPOTHSLSNRRTIMAMQGRISPFGLKDRHDFG 68

Db 1 MALVVLNCKSLGCDLPOTHSLSNRRTIMAMQGRISPFGLKDRHDFG 68

Qy 69 NQFOKAQAIISYLHEMIQOTFNLFTSKDSATWDETLDDKFEYELYOQLNLEACMVG 128

Db 61 NQFOKAQAIISYLHEMIQOTFNLFTSKDSATWDETLDDKFEYELYOQLNLEACVIGVG 120

Qy 129 VEDTPLMNVDSILTVRKRYFORITLYLTKKYSFPCAMVEVRAEIMRSFSLSANLDERLRK 188

Db 121 VEDTPLMNVDSILTVRKRYFORITLYLTKKYSFPCAMVEVRAEIMRSFSLSANLDERLRK 180

Qy 189 E 189

Db 181 E 181

RESULT 10

Interferon alpha-1 precursor - human

N:Alternate names: Interferon alpha-13; interferon alpha-D; interferon alpha-I-1

C:Species: Homo sapiens (man)

C:Date: 22-May-1981 #sequence\_revision 01-Sep-1981 #text\_change 09-Jul-2004

C:Accession: C23285; A91467; A93226; A93249; I58213; S43715; S41196; A01826

R:Capon, D.J.; Shepard, H.M.; Goeddel, D.V. Mol. Cell. Biol. 5, 768-779, 1985

A:Title: Two distinct families of human and bovine interferon-alpha genes are coordinate

A:Reference number: A93070; PMID:85187974; PMID:2965969

A:Accession: C23285

A:Molecule type: DNA

A:Residues: 1-189 <CAP>

A:Cross-references: UNIPROT:P01562; UNIPARC:UPI000002C6D3

R:Mantel, N.; Schwarzelein, M.; Streuli, M.; Panem, S.; Nagata, S.; Weissmann, C. Gene 10, 1-10, 1980

A:Title: The nucleotide sequence of a cloned human leukocyte interferon cDNA.

A:Reference number: A91467; PMID:81005094; PMID:6157600

A:Accession: A91467

A:Molecule type: mRNA

A:Residues: 1-189 <MAN>

A:Cross-references: UNIPARC:UPI000002C6D3; GB:V00537; NID:G32711; PIDN:CAA23798.1; PID:G

R:Taniguchi, T.; Mantel, N.; Schwarzelein, M.; Nagata, S.; Muramatsu, M.; Weissmann, C. Nature 285, 547-549, 1980

A:Title: Human leukocyte and fibroblast interferons are structurally related.

A:Reference number: A93226; PMID:80254543; PMID:6157095

A:Accession: A93226

A:Molecule type: mRNA

A:Residues: 1-189 <TAN>

A:Cross-references: UNIPARC:UPI000002C6D3

R:Goeddel, D.V.; Leung, D.W.; Dull, T.J.; Gross, M.; Lawn, R.M.; McCandliss, R.; Seeburg

Nature 290, 20-26, 1981

A:Title: The structure of eight distinct cloned human leukocyte interferon cDNAs.

A:Reference number: A93249; PMID:81148795; PMID:6163083

A:Accession: A93249

A:Molecule type: mRNA

A:Residues: 1-136; 'V', 138-189 <GOE>

A:Cross-references: UNIPARC:UPI0000014F49; GB:V00538; NID:G32713; PIDN:CAA23799.1; PID:G

A>Note: eight classes of Interferon alpha clones were identified; this sequence is deriv

R:Weber, H.; Weissmann, C. Nucleic Acids Res. 11, 5661-5669, 1983

A:Title: Formation of genes coding for hybrid proteins by recombination between related,

A:Reference number: I58213; PMID:83299241; PMID:6310510

A:Accession: I58213

A:Status: preliminary; translated from GB/EMBL/DBJ

A:Molecule type: DNA

A:Residues: 24-189 <RES>

A:Cross-references: UNIPARC:UPI000002F8D4; GB:M29884; NID:G184583; PIDN:AAA52714.1; PID:

R:Henco, K.; Brosius, J.; Fujiwara, A.; Fujiwara, J.I.; Haynes, J.R.; Hochstadt, J.; Kov

J. Mol. Biol. 185, 227-260, 1985

A:Title: Structural relationship of human interferon alpha genes and pseudogenes.

A:Reference number: A92916; PMID:86037205; PMID:4057246

A:Accession: S43715

A:Molecule type: DNA

A:Residues: 1-189 <HEN>

A:Cross-references: UNIPARC:UPI000002C6D3; EMBL:X75934

R:Roelofs, N. submitted to the EMBL Data Library, December 1993

A:Reference number: S41196

A:Accession: S41196





Nature 289, 606-607, 1981  
 A:Title: Assignment of the disulphide bonds of leukocyte interferon.  
 A:Reference number: A93244; MUID:61123083; PMID:6162107  
 A:Contents: annotation; disulfide bonds  
 R:Margolo, N.J.; Windsor, W.T.; Hruza, A.; Reichert, P.; Tsaropoulos, A.; Baldwin, S.; Protein 17, 62-74, 1993  
 A:Title: A homology model of human interferon alpha-2.  
 A:Reference number: A44748; MUID:9405087; PMID:8234245  
 A:Contents: annotation; theoretical model  
 R:Gewert, D.; Salom, C.; Barber, K.; Macbride, S.; Cooper, H.; Lewis, A.; Wood, J.; Crow, J.; Interferon Res. 13, 227-231, 1993  
 A:Title: Analysis of interferon-alpha 2 sequences in human genomic DNA.  
 A:Reference number: 156312; MUID:93375201; PMID:8366289  
 A:Accession: 156312  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: DNA  
 A:Residues: 1-72 <REN>  
 A:Cross-references: UNIPARC:UPI0000701A9; GB:S64979; NID:G408874; PIDN:AAD13960.1; PID:Rizhao, X.X.; Li, B.L.; Langer, J.A.; Van Riper, G.; Pestka, S.  
 Anal. Biochem. 178, 342-347, 1989  
 A:Title: Construction and phosphorylation of a fusion protein Hu-IFN-alpha A/gamma.  
 A:Reference number: 136908; MUID:89321045; PMID:2502045  
 A:Accession: 136909  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: DNA  
 A:Residues: 'M', 24-188 <RE2>  
 A:Cross-references: UNIPARC:UPI000002C5A3; EMBL:X15631; NID:G22771; PIDN:CAA33638.1; PID:G:Genetics:  
 A:Gene: GDB:IFNA2  
 A:Cross-references: GDB:136359; OMIM:147562  
 A:Map position: 9p22-9p22  
 C:Superfamily: interferon alpha  
 C:Keywords: antiviral; cytokine; glycoprotein; leukocyte  
 F:1-23/Domain: signal sequence #status predicted <SIG>  
 F:24-188/Product: interferon alpha-2 #status experimental <MAT>  
 F:24-121, 52-162/Disulfide bonds: #status experimental  
 F:129/Binding site: carbohydrate (Thr) (covalent) #status experimental

Query Match 82.5%; Score 806.5; DB 1; Length 189;  
 Best Local Similarity 83.1%; Pred. No. 3.2e-66;  
 Matches 157; Conservative 12; Mismatches 19; Indels 1; Gaps 1;

QY 1 MALPFTLMAVLNCKSGSLGCDLPQTHSLSNRRTIMAMQGRISPSFCLDRHDFG 60  
 DB 1 MALPFTLMAVLNCKSGSLGCDLPQTHSLSNRRTIMAMQGRISPSFCLDRHDFG 60  
 QY 61 PPOEFGNGFOKQAOISVLEHMIQOTFNLSTKDSATWDETLLDKFTELYOQLNDLE 120  
 DB 61 PPOEFGNGFOKQAOISVLEHMIQOTFNLSTKDSATWDETLLDKFTELYOQLNDLE 119  
 QY 121 ACMQGEVGEVDETPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVVAEIMRSFSLSAN 180  
 DB 121 ACMQGEVGEVDETPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVVAEIMRSFSLSAN 179  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 188

RESULT 15  
 IVHUI6  
 Interferon alpha-I-16 precursor - human  
 N:Alternate names: HuIFN-alpha-16; Interferon alpha-I-WA; type I interferon  
 C:Species: Homo sapiens (man)  
 C:Date: 28-Dec-1987 #sequence revision 28-Dec-1987 #text\_change 09-Jul-2004  
 C:Accession: G23753; A22068; I73334  
 R:Henco, K.; Brosius, J.; Fujisawa, A.; Fujisawa, J.I.; Haynes, J.R.; Hochstadt, J.; Kov, J. Mol. Biol. 185, 227-260, 1985  
 A:Title: Structural relationship of human interferon alpha genes and pseudogenes.  
 A:Reference number: A92916; MUID:86037205; PMID:4057246  
 A:Accession: G23753  
 A:Molecule type: DNA  
 A:Residues: 1-189 <HEN>

A:Cross-references: UNIPROT:P05015; UNIPARC:UPI0000047763; GB:X02957; NID:G32653; PIDN:CI  
 R:Torczynski, R.M.; Fuke, M.; Bollon, A.P.  
 Proc. Natl. Acad. Sci. U.S.A. 81, 6451-6455, 1984  
 A:Title: Human genomic library screened with 17-base oligonucleotide probes yields a novel  
 A:Reference number: A22068; MUID:85038533; PMID:6387705  
 A:Accession: A22068  
 A:Molecule type: DNA  
 A:Residues: 1-189 <TOR>  
 A:Cross-references: UNIPARC:UPI0000047763; GB:X02055; NID:G184620; PIDN:AAA22727.1; PID:R:Gen. E.; Berzins, V.M.; Janone, I.; Tsimanis, A.; Vishnevsky, Y.; Apsalons, U.  
 U. Interferon Res. 4, 609-617, 1984  
 A:Title: Novel human leukocyte interferon subtype and structural comparison of alpha int  
 A:Reference number: 156313; MUID:85056523; PMID:6548765  
 A:Accession: I73334  
 A:Status: preliminary; translated from GB/EMBL/DBJ  
 A:Molecule type: mRNA  
 A:Residues: 1-189 <RS>  
 A:Cross-references: UNIPARC:UPI000047763; GB:M28585; NID:G184643; PIDN:AAA36042.1; PID:G:Genetics:  
 A:Gene: GDB:IFNA16  
 A:Cross-references: GDB:136357; OMIM:147580  
 A:Map position: 9p22-9p22  
 A:Intons: #status absent  
 C:Superfamily: interferon alpha  
 C:Keywords: antiviral; cytokine; leukocyte  
 F:1-23/Domain: signal sequence #status predicted <SIG>  
 F:24-188/Product: interferon alpha-I-16 #status predicted <MAT>  
 F:24-122, 52-162/Disulfide bonds: #status predicted

Query Match 82.3%; Score 805; DB 1; Length 189;  
 Best Local Similarity 82.5%; Pred. No. 4.5e-66;  
 Matches 156; Conservative 12; Mismatches 21; Indels 0; Gaps 0;

QY 1 MALPFTLMAVLNCKSGSLGCDLPQTHSLSNRRTIMAMQGRISPSFCLDRHDFG 60  
 DB 1 MALPFTLMAVLNCKSGSLGCDLPQTHSLSNRRTIMAMQGRISPSFCLDRHDFG 60  
 QY 61 PPOEFGNGFOKQAOISVLEHMIQOTFNLSTKDSATWDETLLDKFTELYOQLNDLE 120  
 DB 61 PPOEFGNGFOKQAOISVLEHMIQOTFNLSTKDSATWDETLLDKFTELYOQLNDLE 120  
 QY 121 ACMQGEVGEVDETPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVVAEIMRSFSLSAN 180  
 DB 121 ACMQGEVGEVDETPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVVAEIMRSFSLSAN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

Search completed: December 15, 2005, 13:03:27  
 Job time : 39 secs

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# OM protein - protein search, using sw model

Run on: December 15, 2005, 12:31:48 ; Search time 189 Seconds  
(without alignments)  
439.379 Million cell updates/sec

Title: US-10-698-402-2

Perfect score: 978  
Sequence: 1 MALPFVILMLVNLCKSLIC.....EIKRSFSLANLQERLRKE 189

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 2443163 seqs, 439378781 residues

Total number of hits satisfying chosen parameters: 2443163

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :

A\_Geneseq\_21:\*

- 1: geneeqp19808:\*
- 2: geneeqp19908:\*
- 3: geneeqp20008:\*
- 4: geneeqp20018:\*
- 5: geneeqp20028:\*
- 6: geneeqp20038:\*
- 7: geneeqp20048:\*
- 8: geneeqp20058:\*
- 9: geneeqp20068:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	978	100.0	189	2	AAR07678 IFN-alpha
2	978	100.0	189	2	AAR07678 IFN-alpha
3	978	100.0	189	2	AAR07678 IFN-alpha
4	978	100.0	189	2	AAR07678 IFN-alpha
5	978	100.0	189	2	AAR07678 IFN-alpha
6	978	100.0	189	2	AAR07678 IFN-alpha
7	978	100.0	189	2	AAR07678 IFN-alpha
8	978	100.0	189	2	AAR07678 IFN-alpha
9	978	100.0	189	2	AAR07678 IFN-alpha
10	978	100.0	189	2	AAR07678 IFN-alpha
11	978	100.0	189	2	AAR07678 IFN-alpha
12	978	100.0	189	2	AAR07678 IFN-alpha
13	978	100.0	189	2	AAR07678 IFN-alpha
14	978	100.0	189	2	AAR07678 IFN-alpha
15	978	100.0	189	2	AAR07678 IFN-alpha
16	978	100.0	189	2	AAR07678 IFN-alpha
17	978	100.0	189	2	AAR07678 IFN-alpha
18	978	100.0	189	2	AAR07678 IFN-alpha
19	978	100.0	189	2	AAR07678 IFN-alpha
20	978	100.0	189	2	AAR07678 IFN-alpha
21	978	100.0	189	2	AAR07678 IFN-alpha
22	978	100.0	189	2	AAR07678 IFN-alpha
23	978	100.0	189	2	AAR07678 IFN-alpha
24	978	100.0	189	2	AAR07678 IFN-alpha

25	852	87.1	189	5	ABG68076 Human int
26	852	87.1	189	5	ABG68071 Human int
27	852	87.1	189	5	ADY67663 Human int
28	852	87.1	189	9	ADY67673 Human int
29	851	87.0	189	1	AAp20108 Sequence
30	851	87.0	189	5	AAu84283 Human end
31	851	87.0	189	5	ABb07436 Interfero
32	851	87.0	189	5	ABb07433 Interfero
33	851	87.0	189	5	AAg78570 Human int
34	851	87.0	189	6	ABb98719 Human alp
35	851	87.0	189	8	Adn10810 Human int
36	851	87.0	189	8	Adn10813 Human int
37	851	87.0	189	8	Adn10813 Human int
38	851	87.0	189	8	Adn10813 Human int
39	851	87.0	189	9	ADN02281 Human int
40	851	87.0	189	9	ADN02284 Human int
41	848	86.7	189	1	AAp30179 Sequence
42	848	86.7	189	1	AAp30123 Sequence
43	848	86.7	189	6	AAo15998 Mutant hu
44	847	86.6	167	1	AAp80052 Sequence
45	846	86.5	189	6	AAo15999 Mutant hu

## ALIGNMENTS

RESULT 1	AAAR07678	standard; protein; 189 AA.
ID	AAAR07678	
XX	AAAR07678	
AC	AAAR07678	
XX	10-MAR-2003 (revised)	
DT	18-FEB-1991 (first entry)	
XX	IFN-alpha 61.	
DE	Human IFN, therapeutic compsn; IFN-alpha 176; IFN-alpha 61; IFN-beta 1.	
XX	Homo sapiens.	
OS	US4966843-A.	
XX	30-OCT-1990.	
PD	31-JUL-1985; 85US-00761180.	
XX	01-NOV-1982; 82US-00438991.	
XX	(CERTU ) CERTUS CORP.	
PA	Mccormick FP, Innis MA, Ringold GM,	
XX	WPI; 1990-347916/46.	
XX	N-PSDB; AAQ06495.	
DR	Decyribonucleic acid constructs - operably linking human interferon-and	
XX	selective marker-genes and promoter and expression control sequences.	
PT	Disclosure; Fig 8; 33pp; English.	
XX	This recombinant human IFN-alpha 61 is encoded by a DNA construct contg.	
XX	the IFN-alpha 61 gene, a marker gene and expression control sequences. It	
CC	is produced in high yields without detectable amts. of host IFN. See also	
CC	AAQ06496-98. (Updated on 10-MAR-2003 to add missing OS field.)	
XX	Sequence 189 AA;	
SO	Query Match 100.0%; Score 978; DB 2; Length 189;	
QY	Best Local Similarity 100.0%; Pred. No. 1.7e-89;	
	Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	
	1 MALPFVILMLVNLCKSLICGCDLPQTHSLNRRTIMIAQWGRISPFSLKDRHDFG 60	



Db 1 MALPVLIMALVNLCKSIGCDLPQTHSLSNRRITLMIWAQGRISPFSCLDNRHDFG 60  
Qy 61 PPQEPFGNGQFOKQAIISVHEMIQOTFNLSTQDSSATWDETLIDKFTYELYYOQNDLE 120  
Db 61 PPQEPFGNGQFOKQAIISVHEMIQOTFNLSTQDSSATWDETLIDKFTYELYYOQNDLE 120  
Qy 121 ACMQOEVEDEPTPLMANVDSILTVRKYFORITLYLTEKKYSPCAMEVYRAEIMRSFSLSAN 180  
Db 121 ACMQOEVEDEPTPLMANVDSILTVRKYFORITLYLTEKKYSPCAMEVYRAEIMRSFSLSAN 180  
Qy 181 LQERLRKE 189  
Db 181 LQERLRKE 189

## RESULT 2

AAW70371 ID AAW70371 standard; protein; 189 AA.  
XX AC AAW70371;  
XX DT 26-NOV-1998 (first entry)  
XX DE Human interferon-alpha61 (IFN-alpha61).  
XX KW Human; interferon-alpha61; IFN-alpha61; production; CHO cell; cancer;  
XX KM antiviral.  
XX OS Homo sapiens.  
XX PN US5795779-A.  
XX PD 18-AUG-1998.  
XX PF 12-AUG-1994; 94US-00288796.  
XX PR 01-NOV-1982; 82US-00438991.  
XX PR 31-JUN-1985; 85US-00761180.  
XX PR 29-JUN-1990; 90US-00546519.  
XX PR 09-JAN-1992; 92US-00819626.  
XX PA (BERLEX LAB INC.  
XX PA (STRD) UNIV LELAND STANFORD JUNIOR.  
XX PI Ringold GM, Innis MA, McCormick FP;  
XX DR WPI, 1998-466673/40.  
XX DR N-PSDB; AAV33295.  
XX PT Interferon DNA transformed chinese hamster ovary cell culture - useful  
XX PT for high yield recombinant production of correctly processed human  
XX PT Interferon-beta.  
XX PS Disclosure; Fig 10; 36pp; English.  
XX CC The present sequence represents a human interferon-alpha61 (IFN-alpha61).  
XX CC The specification describes a construct for the production of IFNs in  
XX CC chinese hamster ovary (CHO) cell culture compositions. IFNs are small,  
XX CC species specific, mammalian, single chain polypeptides, produced in  
XX CC response to inducers e.g. viruses, mitogens, proteins etc. They exhibit  
XX CC antiviral, anti-proliferative and immunoregulatory properties and are  
XX CC therefore useful as therapeutics in control of cancer and antiviral  
XX CC diseases. The cell culture composition is useful for the recombinant  
XX CC production of high amounts of IFN in CHO cells  
XX SQ Sequence 189 AA;

Query Match 100.0%; Score 978; DB 2; Length 189;  
Best Local Similarity 100.0%; Pred. No. 1.7e-89;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MALPVLIMALVNLCKSIGCDLPQTHSLSNRRITLMIWAQGRISPFSCLDNRHDFG 60

Db 1 MALPVLIMALVNLCKSIGCDLPQTHSLSNRRITLMIWAQGRISPFSCLDNRHDFG 60  
Qy 61 PPQEPFGNGQFOKQAIISVHEMIQOTFNLSTQDSSATWDETLIDKFTYELYYOQNDLE 120  
Db 61 PPQEPFGNGQFOKQAIISVHEMIQOTFNLSTQDSSATWDETLIDKFTYELYYOQNDLE 120  
Qy 121 ACMQOEVEDEPTPLMANVDSILTVRKYFORITLYLTEKKYSPCAMEVYRAEIMRSFSLSAN 180  
Db 121 ACMQOEVEDEPTPLMANVDSILTVRKYFORITLYLTEKKYSPCAMEVYRAEIMRSFSLSAN 180  
Qy 181 LQERLRKE 189  
Db 181 LQERLRKE 189

## RESULT 3

ABB07431 ID ABB07431 standard; peptide; 189 AA.  
XX AC ABB07431;  
XX DT 09-APR-2002 (first entry)  
XX DE Interferon-alphas protein fragment.  
XX KW Interferon-beta-2; IFN-beta2; neuroprotective; cyrostatic; virucide;  
XX KM antitumritic; antineumatic; gene therapy; interferon-alphas.  
XX OS unidentified.  
XX PN WO200195929-A2.  
XX PD 20-DEC-2001.  
XX PF 18-JUN-2001; 2001WO-US041022.  
XX PR 16-JUN-2000; 2000US-0212046P.  
XX PR 15-JUN-2001; 2001US-00861050.  
XX PA (SCHD) SCHERING AG.  
XX PI Croze EM, Faulds D, Wagner TC;  
XX PI WPI, 2002-130714/17.  
XX DR Composition for treating multiple sclerosis, cancer and viral diseases  
XX PT and infections, comprises human interferon-beta-2 or its biologically-  
XX PT active fragment or derivative.  
XX PS Disclosure; Fig 4; 61pp; English.  
XX CC The invention relates to a pharmaceutical composition comprising a  
XX CC therapeutically effective amount of human interferon-beta-2 (IFN-beta2)  
XX CC polypeptide. The composition is useful for treating multiple sclerosis in  
XX CC mammals, in particular a human in need of such treatment, and also cancer  
XX CC e.g. interepithelial neoplasia and cervical cancer, autoimmune diseases  
XX CC e.g. rheumatoid arthritis and viral diseases or infections. The  
XX CC composition is useful for anti-oncogene regulation, antitumour activity,  
XX CC antiviral activity, cell growth inhibition or antigrowth activity, anti-  
XX CC proliferation, enhancement of cytotoxicity of lymphocytes, inducement or  
XX CC inhibition of differentiation of target cells, immunoregulatory activity,  
XX CC macrophage activation and down-regulation of oncogenes. Sequences  
XX CC ABB07427-441 represent various interferon (IFN) sequences used for  
XX CC alignment studies with the human IFN-beta2 polypeptide  
XX SQ Sequence 189 AA;

Query Match 100.0%; Score 978; DB 5; Length 189;  
Best Local Similarity 100.0%; Pred. No. 1.7e-89;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MALPVLIMALVNLCKSIGCDLPQTHSLSNRRITLMIWAQGRISPFSCLDNRHDFG 60



```

Db      1 MALPFLMALVYLNKSKISICGLCDLPQTHSLSNRRTLMIMAGMGRISPSCLKDRHDFG 60
Qy      61 PFOEFDGNQFOKAQAISVLHEMIQOTFNLFTKDSATWDETLDKFYTELQOINDLE 120
Db      61 PFOEFDGNQFOKAQAISVLHEMIQOTFNLFTKDSATWDETLDKFYTELQOINDLE 120
Qy      121 ACMQGEVGEDPPLMNVDSILTVRKYFORITLYLTEKTSPCAMEVVRABIMRSFSLSAN 180
Db      121 ACMQGEVGEDPPLMNVDSILTVRKYFORITLYLTEKTSPCAMEVVRABIMRSFSLSAN 180
Qy      181 LOERLRKE 189
Db      181 LOERLRKE 189

RESULT 4
ABP70735
ID      ABP70735 standard; protein; 189 AA.
XX
AC      ABP70735;
XX
DT      25-APR-2003 (first entry)
XX
DE      Human interferon alpha 5.
XX
KW      Human; antiviral; cyostatic; nootropic; neuroprotective;
KW      immunosuppressive; antiasclastic; anti-HIV; anti-inflammatory;
KW      interferon alpha 5; IFNalpha-5; cancer; cardiovascular disorder;
KW      metabolic disease; infectious disease; pneumonia; ulcerative colitis;
KW      central nervous system disorder; AIDS; Alzheimer's disease;
KW      schizophrenia; depression; graft rejection; anaemia; allergy; asthma;
KW      multiple sclerosis; osteoporosis; psoriasis; rheumatoid arthritis;
KW      Crohn's disease; autoimmune disease; wound healing; Kaposi's sarcoma;
KW      gastrointestinal disorder; leukaemia; Parkinson's disease;
KW      cell signalling.
XX
OS      Homo sapiens.
XX
FH      Key Location/Qualifiers
FT      Peptide 1..23
FT      Protein /label= Signal_peptide 24..189
FT      /label= Mature_peptide
XX
PN      FR2824333-A1.
XX
PD      08-NOV-2002.
XX
PF      03-MAY-2001; 2001FR-00005919.
XX
PR      03-MAY-2001; 2001FR-00005919.
XX
PA      (GENO-) GENODYSSEE SA.
XX
XX      Escary JL;
PI      WPI; 2003-142460/14.
XX      N-PSDB; ABZ70351.
DR      New interferon alpha 5 polynucleotides containing single nucleotide
XX      polymorphisms are useful to prevent and treat a variety of disorders and
XX      diseases including cancer and immune disorders.
PT
PS      Claim 17; Page 65-66; 69pp; French.
XX
XX      The present sequence is the protein sequence for human interferon alpha 5
XX      (IFNalpha-5). The coding sequence for this protein has the single
XX      nucleotide polymorphisms (SNPs) c641g and/or g798c. The coding sequence
XX      is useful for preventing or treating cancer, cardiovascular or metabolic
XX      disease not related to the immune system or obesity, infectious disease
XX      particularly viral, pneumonia, ulcerative colitis, disease of the central
XX      nervous system, AIDS, Alzheimer's disease, schizophrenia, depression,

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CC      graft rejection, anaemia, particularly in dialysis patients, allergies,
CC      asthma, multiple sclerosis, osteoporosis, psoriasis, rheumatoid
CC      arthritis, Crohn's disease, autoimmune diseases and disorders, wound
CC      healing, gastrointestinal disorders, genital or venereal warts, or
CC      disorders arising from chemotherapy. A particular use is to prevent or
CC      treat leukaemia such as chronic myeloid leukaemia, multiple myelomas,
CC      follicular lymphomas, malignant melanomas, renal carcinomas metastases,
CC      Alzheimer's disease, Parkinson's disease and tumours which arise due to
CC      an immune system deficiency, particularly Kaposi's sarcoma in AIDS
XX
SQ      Sequence 189 AA;
Query Match      100.0%; Score 978; DB 6; Length 189;
Best Local Similarity 100.0%; Pred. No. 1.7e-89;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy      1 MALPFLMALVYLNKSKISICGLCDLPQTHSLSNRRTLMIMAGMGRISPSCLKDRHDFG 60
Db      1 MALPFLMALVYLNKSKISICGLCDLPQTHSLSNRRTLMIMAGMGRISPSCLKDRHDFG 60
Qy      61 PFOEFDGNQFOKAQAISVLHEMIQOTFNLFTKDSATWDETLDKFYTELQOINDLE 120
Db      61 PFOEFDGNQFOKAQAISVLHEMIQOTFNLFTKDSATWDETLDKFYTELQOINDLE 120
Qy      121 ACMQGEVGEDPPLMNVDSILTVRKYFORITLYLTEKTSPCAMEVVRABIMRSFSLSAN 180
Db      121 ACMQGEVGEDPPLMNVDSILTVRKYFORITLYLTEKTSPCAMEVVRABIMRSFSLSAN 180
Qy      181 LOERLRKE 189
Db      181 LOERLRKE 189

RESULT 5
ADN10804
ID      ADN10804 standard; protein; 189 AA.
XX
AC      ADN10804;
XX
DT      01-JUL-2004 (first entry)
XX
DE      Human interferon-alpha 5.
XX
KW      Human; interferon-alpha 5; protein engineering; virucide;
KW      immunosuppressive; cyostatic; antiinflammatory.
XX
OS      Homo sapiens.
XX
PN      WO2004031352-A2.
XX
PD      15-APR-2004.
XX
PF      30-SEP-2003; 2003WO-US030802.
XX
PR      01-OCT-2002; 2002US-0415541P.
XX      10-JUN-2003; 2003US-0477246P.
XX      24-JUL-2003; 2003US-0489725P.
XX
PA      (XENC-) XENCOR.
XX
PI      Aguinaldo AM, Beyna AJ, Desjarlais JR, Marshall SA, Muchhal U;
PI      Villegas WFA, Zhukovsky E, Cho HS;
XX      WPI; 2004-330165/30.
XX      GENBANK; 10835103.
DR
XX
XX      New variant type I Interferon protein exhibiting improved solubility
XX      relative to a wild type interferon protein, useful for treating
XX      autoimmune diseases, viral infections, inflammatory diseases or cancer.
XX      Claim 1; SEQ ID NO 5; 75pp; English.
XX
XX      The present sequence is that of human interferon-alpha 5. The invention

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CC relates to interferon variants with improved properties, such as  
 CC increased solubility, increased specific activity and decreased  
 CC immunogenicity. Various strategies may be used to design such variants,  
 CC including substituting solvent-exposed hydrophobic residues with polar  
 CC residues, modifying residues that affect the isoelectric point of the  
 CC protein, and reducing the occurrence of unwanted protein-protein  
 CC interactions by modifying residues located at a dimer interface. Variant  
 CC type 1 interferon proteins ADN10818-ADN10829 that exhibit improved  
 CC solubility relative to wild-type interferons ADN10800-ADN10817 are  
 CC claimed. The variants maintain the immunomodulatory, antiviral and/or  
 CC antineoplastic activities of the native protein. They differ from the  
 CC native interferon by at least one substitution of a solvent-exposed  
 CC hydrophobic residue. The variants can be obtained by recombinant  
 CC expression in host cells. They are useful for treating autoimmune  
 CC diseases, viral infections, inflammatory diseases or cancer. Wild-type  
 CC interferons, including the present sequence, are used in a claimed method  
 CC of inhibiting interferon dimer formation.

CC Sequence 189 AA;

Query Match 100.0%; Score 978; DB 8; Length 189;

Best Local Similarity 100.0%; Pred. No. 1,7e-89; Mismatches 0; Indels 0; Gaps 0;

Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALPFLMALVNLNCKSICSLGCDLPQTHSLSNRRTIMIAQNGRISPFSCLDKRDHFG 60  
 DB 1 MALPFLMALVNLNCKSICSLGCDLPQTHSLSNRRTIMIAQNGRISPFSCLDKRDHFG 60  
 QY 61 FPOEFDPGNOFQKQAIISVLHEMIQTFTNLFSTKSSATWDETLDDKFTYELYOQNDLE 120  
 DB 61 FPOEFDPGNOFQKQAIISVLHEMIQTFTNLFSTKSSATWDETLDDKFTYELYOQNDLE 120  
 QY 121 ACMQEVGVEDTPLMNVDSILTVRKYFORITLVLTETKYSPCAMEVVAEIMRSFSLSAN 180  
 DB 121 ACMQEVGVEDTPLMNVDSILTVRKYFORITLVLTETKYSPCAMEVVAEIMRSFSLSAN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

RESULT 6  
 ADS16314  
 ID ADS16314 standard; protein; 189 AA.

AC ADS16314;

XX 02-DEC-2004 (first entry)

DE Human interferon (IFN) alpha 5 protein.

XX Interferon; IFN; antiviral; antineoplastic; immunomodulator;  
 KM IFN related disorder; autoimmune disease; multiple sclerosis;  
 KM diabetes mellitus; lupus erythematosus; Crohn's disease; asthma; allergy;  
 KM psoriasis; viral infection; hepatitis C; hepatitis B; viral encephalitis;  
 KM cell proliferation disease; cancer; osteosarcoma; basal cell carcinoma;  
 KM multiple myeloma; chronic lymphocytic leukaemia; Kaposi's sarcoma;  
 KM renal-cell carcinoma; ovarian cancer; hairy-cell leukaemia;  
 KM Hodgkin's disease; gene therapy; human; IFN alpha 5.

OS Homo sapiens.

XX US2004175359-A1.

XX 09-SEP-2004.

XX 30-SEP-2003; 2003US-00677093.

XX 12-NOV-2002; 2002US-0425851P.

XX (DESV/) DESJARLAIS J R.

XX (MARS/) MARSHALL S A.

XX (MOY/) MO Y.

PA (THOM/) THOMASON A R.

XX Desjarlais JR, Marshall SA, Mo Y, Thomason AR;

XX WPI; 2004-642104/62.

DR GENBANK; 4504597.

XX Novel type 1 interferon (IFN) having antiviral, antineoplastic or  
 PT immunomodulatory activity same as wild-type IFN, and being circularly  
 PT permuted or cyclized to provide modulated characteristics, useful for  
 PT treating IFN related diseases.

PS Disclosure; SEQ ID NO 5; 48pp; English.

CC The present invention relates to a type 1 interferon (IFN) comprising  
 CC antiviral, antineoplastic and immunomodulatory activity similar to a  
 CC naturally occurring IFN and has been circularly permuted or cyclised and  
 CC has at least one modulated characteristic as compared to the naturally  
 CC occurring IFN. The invention is useful for treating IFN related disorder  
 CC which includes autoimmune diseases such as multiple sclerosis, diabetes  
 CC mellitus, lupus erythematosus, Crohn's disease, asthma, allergies and  
 CC psoriasis, viral infections such as hepatitis C, hepatitis B and viral  
 CC osteosarcoma, basal cell carcinoma, multiple myeloma, chronic lymphocytic  
 CC leukaemia, Kaposi's sarcoma, renal-cell carcinoma, ovarian cancer, hairy-  
 CC cell leukaemia and Hodgkin's disease. The invention is also useful in  
 CC gene therapy. The present sequence is human interferon (IFN) protein.

XX Sequence 189 AA;

Query Match 100.0%; Score 978; DB 8; Length 189;

Best Local Similarity 100.0%; Pred. No. 1,7e-89; Mismatches 0; Indels 0; Gaps 0;

Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALPFLMALVNLNCKSICSLGCDLPQTHSLSNRRTIMIAQNGRISPFSCLDKRDHFG 60  
 DB 1 MALPFLMALVNLNCKSICSLGCDLPQTHSLSNRRTIMIAQNGRISPFSCLDKRDHFG 60  
 QY 61 FPOEFDPGNOFQKQAIISVLHEMIQTFTNLFSTKSSATWDETLDDKFTYELYOQNDLE 120  
 DB 61 FPOEFDPGNOFQKQAIISVLHEMIQTFTNLFSTKSSATWDETLDDKFTYELYOQNDLE 120  
 QY 121 ACMQEVGVEDTPLMNVDSILTVRKYFORITLVLTETKYSPCAMEVVAEIMRSFSLSAN 180  
 DB 121 ACMQEVGVEDTPLMNVDSILTVRKYFORITLVLTETKYSPCAMEVVAEIMRSFSLSAN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

RESULT 7

ADW02275  
 ID ADW02275 standard; protein; 189 AA.

AC ADW02275;

XX 07-APR-2005 (first entry)

DE Human interferon alpha 5.

XX interferon alpha; interferon; IFN-alpha; neuroprotective;  
 KM antineoplastic; hepatotropic; virucide; cytostatic; gene therapy;  
 KM multiple sclerosis; viral hepatitis; cancer.

OS Homo sapiens.

XX WO2005003157-A2.

XX 13-JAN-2005.

XX 30-MAR-2004; 2004WO-US009824.

PR 10-JUN-2003; 2003US-0477246P.  
 PR 24-JUL-2003; 2003US-0489725P.  
 PR 30-SEP-2003; 2003US-00676705.  
 PR 30-SEP-2003; 2003WO-US030802.  
 XX  
 XX (XENC-) XENCOR.  
 PI Aquinaldo AM, Beyna AJ, Cho HS, Desjarlais JR, Marshall SA,  
 PI Muchhal U, Villegas MFA, Zhukovsky E, Quesenberry MS;  
 XX WPI; 2005-091765/10.  
 XX  
 PT New variant type 1 Interferon (IFN)-beta, alpha or kappa proteins  
 PT exhibiting modified immunogenicity, useful for treating IFN-responsive  
 PT diseases such as multiple sclerosis, viral hepatitis or cancer.  
 XX  
 XX Disclosure; Fig 1; 112pp; English.  
 XX  
 CC This invention describes a novel variant type 1 interferon (IFN)-beta,  
 CC alpha or kappa protein exhibiting modified immunogenicity as compared to  
 CC a wild type protein. The variant type 1 IFN-beta exhibits modified  
 CC immunogenicity if there is at least one modification at a position  
 CC selected from 1, 2, 3, 4, 5, 6, 8, 9, 12, 15, 16, 22, 28, 30, 32, 36, 42,  
 CC 43, 46, 47, 48, 49, 51, 92, 93, 96, 100, 101, 104, 111, 113, 116, 117,  
 CC 120, 121, 124, 130, 148, and 155. The variant type 1 IFN-alpha protein  
 CC comprises at least one modification at position 16, 27, 30, 89, 100, 110,  
 CC 111, 117, 128 or 161. The variant type 1 IFN-kappa protein comprises at  
 CC least one modification at position 1, 5, 8, 15, 18, 28, 30, 33, 37, 46,  
 CC 48, 52, 65, 68, 76, 79, 89, 112, 115, 120, 127, 133, 151, 161, 168 or  
 CC 171. The variant proteins are used in a method for treating an interferon  
 CC -responsive disorder and for methods of modulating immunogenicity of IFN.  
 CC The variant protein demonstrates reduced binding to at least one human  
 CC class II MHC allele. The products of the invention have neuroprotective,  
 CC antiinflammatory, hepatotropic, virucide and cytostatic activity and can  
 CC be used for gene therapy. The composition and methods are useful for  
 CC treating interferon-responsive diseases such as multiple sclerosis, viral  
 CC hepatitis or cancer. This sequence represents a human type I interferon  
 CC alpha protein used in the method of the invention.  
 XX  
 SQ Sequence 189 AA;  
 Query Match 100.0%; Score 978; DB 9; Length 189;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-89;  
 Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

XX  
 OS Homo sapiens.  
 XX  
 PN MO2005030999-A1.  
 XX  
 PD 07-APR-2005.  
 XX  
 PF 24-SEP-2004; 2004WO-US031524.  
 XX  
 PR 25-SEP-2003; 2003US-0506221P.  
 PR 08-OCT-2003; 2003US-0509594P.  
 XX  
 XX (DAND ) DANA FARBER CANCER INST INC.  
 PI Ritz J, Wu CJ;  
 XX WPI; 2005-273394/28.  
 DR N-PSDB; AD226752.  
 XX  
 PT Detecting lineage-specific cells in a biological sample, useful for  
 PT determining the clinical outcome of a progenitor cell transfer in a  
 PT subject, comprises identifying lineage-specific mRNA in the sample.  
 XX  
 XX Disclosure; SEQ ID NO 379; 393pp; English.  
 CC  
 CC The invention relates to a method of detecting lineage-specific cells in  
 CC a biological sample which comprises identifying lineage-specific mRNA in  
 CC the sample. The methods are useful for determining the clinical outcome  
 CC of a progenitor cell transfer in a subject, and for identifying or  
 CC quantifying lineage-specific cells. The present sequence represents the  
 CC amino acid sequence of a human protein used to identify lineage-specific  
 CC cells.  
 XX  
 XX  
 SQ Sequence 189 AA;  
 Query Match 100.0%; Score 978; DB 9; Length 189;  
 Best Local Similarity 100.0%; Pred. No. 1.7e-89;  
 Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MALPFVILMALVYNCKSLGCDLPQTHSLSNRRTLMMAQGRISPSFCLXDRHDFG 60  
 DB 1 MALPFVILMALVYNCKSLGCDLPQTHSLSNRRTLMMAQGRISPSFCLXDRHDFG 60  
 QY 61 PPOEEFGNGFOKAQASVHEMIQOTFNLFTSDSSATWDETLLDKFYTELXQOLNDLE 120  
 DB 61 PPOEEFGNGFOKAQASVHEMIQOTFNLFTSDSSATWDETLLDKFYTELXQOLNDLE 120  
 QY 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLYLTKKSPCAMEVVRAEIMRSFSLSAN 180  
 DB 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLYLTKKSPCAMEVVRAEIMRSFSLSAN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

QY 1 MALPFVILMALVYNCKSLGCDLPQTHSLSNRRTLMMAQGRISPSFCLXDRHDFG 60  
 DB 1 MALPFVILMALVYNCKSLGCDLPQTHSLSNRRTLMMAQGRISPSFCLXDRHDFG 60  
 QY 61 PPOEEFGNGFOKAQASVHEMIQOTFNLFTSDSSATWDETLLDKFYTELXQOLNDLE 120  
 DB 61 PPOEEFGNGFOKAQASVHEMIQOTFNLFTSDSSATWDETLLDKFYTELXQOLNDLE 120  
 QY 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLYLTKKSPCAMEVVRAEIMRSFSLSAN 180  
 DB 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLYLTKKSPCAMEVVRAEIMRSFSLSAN 180  
 QY 181 LOERLRKE 189  
 DB 181 LOERLRKE 189

RESULT 8  
 AD226753  
 ID AD226753 standard; protein; 189 AA.  
 XX  
 XX AD226753;  
 XX  
 DT 16-JUN-2005 (first entry)  
 XX  
 XX Human IFNalpha5.  
 XX  
 KW cell culture; stem cell; IFNalpha5.

RESULT 9  
 ABP70736  
 ID ABP70736 standard; protein; 189 AA.  
 XX  
 XX ABP70736;  
 XX  
 DT 25-APR-2003 (first entry)  
 XX  
 XX Human interferon alpha 5 variant #1.  
 XX  
 KW Human: antiviral; cytostatic; neurotropic; neuroprotective;  
 KW immunosuppressive; antischismatic; anti-HIV; anti-inflammatory;  
 KW interferon alpha 5; IFNalpha-5; cancer; cardiovascular disorder;  
 KW metabolic disease; infectious disease; pneumonia; ulcerative colitis;  
 KW central nervous system disorder; AIDS; Alzheimer's disease;  
 KW schizophrenia; depression; graft rejection; anaemia; allergy; asthma;  
 KW multiple sclerosis; osteoporosis; psoriasis; rheumatoid arthritis;



ID	ABP70737	standard; protein: 189 AA.
XX	ABP70737;	
AC	25-APR-2003	(first entry)
DT	Human interferon alpha 5 variant #2.	
XX	Human; antiviral; cyostatic; noctropic; neuroprotective;	
KM	immunosuppressive; anti-HIV; anti-inflammatory;	
KM	interon alpha 5; IFNalpha-5; cancer; cardiovascular disorder;	
KM	metabolic disease; infectious disease; pneumonia; ulcerative colitis;	
KM	central nervous system disorder; AIDS; Alzheimer's disease;	
KM	schizophrenia; depression; graft rejection; anaemia; allergy; asthma;	
KM	multiple sclerosis; osteoporosis; psoriasis; rheumatoid arthritis;	
KM	Crohn's disease; autoimmune disease; wound healing; Kaposi's sarcoma;	
KM	gastrointestinal disorder; leukaemia; Parkinson's disease;	
KM	cell signalling.	
XX	Homo sapiens.	
OS	Key	Location/Qualifiers
XX	Misc-difference 122	
FT	/note= "Cys substituted with Ser"	
XX	FR2824333-A1.	
PN	08-NOV-2002.	
PD	03-MAY-2001; 2001FR-00005919.	
XX	03-MAY-2001; 2001FR-00005919.	
PF	(GENO-) GENODYSSEE SA.	
XX	Becary JL;	
PI	WPI; 2003-142460/14.	
XX	New interferon alpha 5 polynucleotides containing single nucleotide	
PT	polymorphisms are useful to prevent and treat a variety of disorders and	
PT	diseases including cancer and immune disorders.	
XX	Claim 17; Page: 69pp; French.	
PS	The present invention relates to human interferon alpha 5 (IFNalpha-5)	
CC	coding sequence (see AB270351). The coding sequence has the single	
CC	nucleotide polymorphisms (SNPs) C6419 and/or G798c. The coding sequence	
CC	is useful for preventing or treating cancer, cardiovascular or metabolic	
CC	disease not related to the immune system or obesity, infectious disease	
CC	particularly viral, pneumonia, ulcerative colitis, disease of the central	
CC	nervous system, AIDS, Alzheimer's disease, schizophrenia, depression,	
CC	graft rejection, anemia, particularly in dialysis patients, allergies,	
CC	asthma, multiple sclerosis, osteoporosis, psoriasis, rheumatoid	
CC	arthritis, Crohn's disease, autoimmune diseases and disorders, wound	
CC	healing, gastrointestinal disorders, genital or venereal warts, or	
CC	disorders arising from chemotherapy. A particular use is to prevent or	
CC	treat leukaemia such as chronic myeloid leukaemia, multiple myelomas,	
CC	follicular lymphomas, malignant melanomas, renal carcinomas metastases,	
CC	Alzheimer's disease, Parkinson's disease and tumours which arise due to	
CC	an immune system deficiency, particularly Kaposi's sarcoma in AIDS. The	
CC	present sequence is a IFNalpha-5 variant. This protein is encoded by the	
CC	IFNalpha-5 coding sequence with the G798c SNP. Note: The present sequence	
CC	is not shown in the specification, but is derived from information given	
XX	Sequence 189 AA;	
XX	Query Match 99.0%; Score 968; DB 6; Length 189;	
XX	Best Local Similarity 99.5%; Pred. No. 1,7e-88;	
XX	Matches 188; Conservative 0; Mismatches 1; Indels 0; Gaps 0	

```

Db      1 MALFFVLLMALVNLNCKSSIGSGCDLPQTHSLSNRRRTLIMAQWGRISPFSCLKDRHDFG 60
Qy      61 PPOEEFDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWBTETLIDKFTYELVQQLNDLE 120
Db      61 PPOEEFDGNQFOKAQAISVLHEMIQOTFNLFTSKDSSATWBTETLIDKFTYELVQQLNDLE 120
Qy      121 ACMQOEVGVEDPTPLANNVDSILTVARKYFORITLYITEKKYSPCAMEVVAEIMRSPSLAN 180
Db      121 ASMQOEVGEVETPLMANNVDSILTVARKYFORITLYITEKKYSPCAMEVVAEIMRSPSLAN 180
Qy      181 LOERLARRKE 189
Db      181 LOERLARRKE 189

RESULT 12
AAP30003
ID      AAP30003 standard; protein; 182 AA.
AC      AAP30003;
XX      AAP30003;
XX      25-MAR-2003 (revised)
DT      31-MAY-1992 (first entry)
XX      Sequence of human alpha-interferon (alpha-IFN) Gx-1.
DE      Antiviral; antitumour; anticancer; immunomodulator.
XX      Homo sapiens.
OS      EP09692-A.
XX      28-SEP-1983.
PD      23-MAR-1983; 83EP-00102893.
XX      23-MAR-1982; 82US-00361364.
PF      23-MAR-1982; 82US-00361364.
XX      24-APR-1984; 84US-00602275.
PR      24-APR-1984; 84US-00602275.
XX      (BRIM ) BRISTOL-MYERS CO.
PA      Sloma A;
XX      WIPI; 1983-778408/40.
DR      N-PSDB; AAN30004.
XX      Antiviral alpha-interferon Gx-1 - prodn. from plasmid transformed
PT      Escherichia coli ATCC 39063.
XX      Claim 23; Page 34-36; 41pp; English.
PS      The inventors claim a human alpha-IFN Gx-1 gene and the polypeptide
CC      encoded by it. They also claim a plasmid, a microorganism transformed by
CC      it and the production of human alpha-IFN by recombinant methods. The
CC      microorganism is pref. Escherichia. The initiation sequences may be
CC      derived from the lac or trp operon of E. coli. (Updated on 25-MAR-2003 to
CC      correct PA field.)
XX      correct PA field.)
XX      Sequence 182 AA;
SQ      Query Match 92.7%; Score 907; DB 1; Length 182;
      Best Local Similarity 95.6%; Pred. No. 2,1e-82;
      Matches 174; Conservative 6; Mismatches 2; Indels 0; Gaps 0
Qy      8 LMAIVLVNCKSIGSGCDLPQTHSLSNRRRTLIMAQWGRISPFSCLKDRHDFGPOEEFD 67
Db      1 MMALVVLISCKSSIGSGCDLPQTHSLSNRRRTLIMAQWGRISPFSCLKDRHDFGPOEEFD 60
Qy      68 GNOFOKAQAISVLHEMIQOTFNLFTSKDSSATWBTETLIDKFTYELVQQLNDLEACMQOE 127
Db      61 GNOFOKAQAISVLHEMIQOTFNLFTSKDSSATWBTETLIDKFTYELVQQLNDLEACMQOE 120

```

QY 128 GVEDPLNANVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSANIOERLR 187  
 DB 121 GVEDPLNANVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSANIOERLR 180  
 QY 188 KE 189  
 DB 181 KE 182

## RESULT 13

AECC01739  
 ID AECC01739 standard; protein; 280 AA.  
 AC AECC01739;  
 XX 20-OCT-2005 (first entry)  
 DT  
 DE IFN-IGAG-GPI anchor protein.  
 XX  
 KW Plenti6 vector; protein C; screening; protein expression.  
 XX  
 OS Homo sapiens.  
 XX Synthetic.  
 XX  
 FH Key Location/Qualifiers  
 FT Protein 1..220  
 FT /label= IFN  
 FT Misc-difference 221  
 FT /note= "Read through stop codon"  
 FT Peptide 222..280  
 FT /label= GPI anchor

MO2005073375-A1.

11-AUG-2005.

28-JAN-2005; 2005MO-DK000070.

30-JAN-2004; 2004US-0540820P.

29-NOV-2004; 2004US-0631306P.

(MAXY-) MAXYGEN HOLDINGS LTD.

(MAXY-) MAXYGEN APS.

Bouguin T;

WPI; 2005-555697/56.

N-PSDB; AECC01713.

Screening or selecting cells expressing a desired level of a polypeptide using cells each with an expression cassette having a first polynucleotide, useful for producing and evaluating soluble or membrane-bound protein expression.

Example 4; Fig 18; 84pp; English.

This sequence is encoded by the IFN-IGAG-GPI cassette and includes the native interferon peptide and the GPI anchor sequence. This cassette was used in the construction of a vector used in the method of the invention for screening or selecting cells expressing a desired level of a polypeptide. The method comprises providing cells each having an expression cassette with a first polynucleotide encoding the polypeptide, at least one stop codon downstream of the first polynucleotide, and a second polynucleotide encoding a cell membrane anchoring peptide, a reporter peptide or an epitope tag downstream of the stop codon. The method comprises culturing the cells in the presence of a termination suppressant agent to allow expression of a fusion protein comprising the recombinant polypeptide and the cell membrane anchoring peptide, reporter peptide or epitope tag, and sorting the cells to select at least one cell expressing the fusion protein at a desired level and/or with a desired uniformity. The methods and compositions of the present invention are useful for selectively suppressing stop codons during protein translation, alternatively producing soluble or membrane-bound proteins

CC from the same cell, selecting cell clones or cells, and evaluating  
 CC protein expression.

XX Sequence 280 AA;

Query Match 90.0%; Score 880; DB 9; Length 280;  
 Best Local Similarity 88.9%; Pred. No. 1.8e-79;  
 Matches 168; Conservative 12; Mismatches 9; Indels 0; Gaps 0;

QY 1 MALPFLMALVINCISGSLGCDLPQTHSLNRRITLMIAQGRISPFSCLDNRHDFG 60  
 DB 1 MALPFLMALVINCISGSLGCDLPQTHSLNRRITLMIAQGRISPFSCLDNRHDFG 60  
 QY 61 FPOSEPDGNQFOKAQATSVLHEMTIOQTFNLFTSDSSATPDETLLDKRYTELXQOLNDLE 120  
 DB 61 FPOSEPDGNQFOKAQATSVLHEMTIOQTFNLFTSDSSATPDETLLDKRYTELXQOLNDLE 120  
 QY 121 ACMAQEVGVEDTPIANVDSILTVRKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSAN 180  
 DB 121 ACVIGQEVGETPIANVDSILAVKKYFORITLYLTEKKYSPCAMEVVAEIMRSFSLSKI 180  
 QY 181 LOERLRKE 189  
 DB 181 FOERLRKE 189

## RESULT 14

AAP60304  
 ID AAP60304 standard; protein; 166 AA.

AAP60304;

25-MAR-2003 (revised)  
 DT 23-AUG-1991 (first entry)

Sequence of Interferon (IFN) alpha S51B10.

Antiviral; antitumour.

Homo sapiens.

EPI73887-A.

12-MAR-1986.

10-AUG-1985; 85EP-00110061.

27-AUG-1984; 84JP-00179105.

(SHIO) SHIONOGI & CO LTD.

Teraoka H, Sato K, Tanaka K;

WPI; 1986-070431/11.

N-PSDB; AAP60236.

New interferon alpha S51B10 and alpha S17H9 - prepd. by DNA recombinant techniques.

Claim 1; Fig 2; 37pp; English.

IFN alpha-S51B10 and IFN alpha-S17H9 have antiviral and antitumour activities. Dosage is 1,000,000 - 10,000,000 units per day. IFNs are prepared from Balb-1 cells induced with Sendai virus by known recombinant DNA techniques. (Updated on 25-MAR-2003 to correct PA field.)

Sequence 166 AA;

Query Match 88.3%; Score 864; DB 1; Length 166;  
 Best Local Similarity 100.0%; Pred. No. 3.8e-78;  
 Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 24 CDLPQTHSLNRRITLMIAQGRISPFSCLDNRHDFGPOSEPDGNQFOKAQATSVLHEM 83



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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 15, 2005, 12:54:49 ; Search time 166 Seconds  
(without alignments)  
475.721 Million cell updates/sec

Title: US-10-698-402-2

Perfect score: 978  
Sequence: 1 MALPFVLMALVNLNCKSIC.....EIMRSFSLANQERLRKE 189

Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 1867569 seqs, 417829326 residues

Total number of hits satisfying chosen parameters: 1867569

Minimum DB seq length: 0  
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%  
Maximum Match 100%  
Listing first 45 summaries

Database : Published Applications AA Main:\*

- 1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep:\*
- 2: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep:\*
- 3: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep:\*
- 4: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep:\*
- 5: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep:\*
- 6: /cgn2\_6/ptodata/1/pubpaa/US11\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed.  
Pred is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	978	100.0	189	US-09-881-050-21	Sequence 21, Appl
2	978	100.0	189	US-10-676-705-5	Sequence 5, Appl
3	978	100.0	189	US-10-698-402-2	Sequence 2, Appl
4	978	100.0	189	US-10-677-093-5	Sequence 5, Appl
5	978	100.0	189	US-10-820-467-5	Sequence 5, Appl
6	864	88.3	166	US-09-977-034-11	Sequence 11, Appl
7	864	88.3	166	US-10-658-834A-187	Sequence 187, App
8	864	88.3	166	US-10-714-817-34	Sequence 34, Appl
9	864	88.3	166	US-10-953-259-11	Sequence 11, Appl
10	864	88.3	166	US-10-820-467-35	Sequence 35, Appl
11	852	87.1	189	US-10-415-969-62	Sequence 62, Appl
12	852	87.1	189	US-10-415-969-72	Sequence 72, Appl
13	851	87.0	189	US-09-881-050-23	Sequence 23, Appl
14	851	87.0	189	US-09-881-050-26	Sequence 26, Appl
15	851	87.0	189	US-09-919-497-73	Sequence 73, Appl
16	851	87.0	189	US-10-673-886A-2	Sequence 2, Appl
17	851	87.0	189	US-10-676-705-11	Sequence 11, Appl
18	851	87.0	189	US-10-676-705-14	Sequence 14, Appl
19	851	87.0	189	US-10-677-093-11	Sequence 11, Appl
20	851	87.0	189	US-10-677-093-14	Sequence 14, Appl
21	851	87.0	189	US-10-820-467-11	Sequence 11, Appl
22	851	87.0	189	US-10-820-467-14	Sequence 14, Appl
23	845	86.4	189	US-10-415-969-64	Sequence 64, Appl
24	845	86.4	189	US-10-718-733A-2	Sequence 2, Appl
25	844	86.3	166	US-10-389-674-81	Sequence 81, Appl
26	840	85.9	189	US-10-415-969-58	Sequence 58, Appl
27	839	85.8	189	US-10-415-969-60	Sequence 60, Appl

28	838	85.7	189	3	US-09-881-050-20	Sequence 20, Appl
29	838	85.7	189	4	US-10-676-705-6	Sequence 6, Appl
30	838	85.7	189	4	US-10-677-093-6	Sequence 6, Appl
31	838	85.7	189	5	US-10-820-467-6	Sequence 6, Appl
32	832	85.1	189	3	US-09-881-050-22	Sequence 22, Appl
33	832	85.1	189	3	US-09-908-193-29	Sequence 29, Appl
34	832	85.1	189	4	US-10-676-705-10	Sequence 10, Appl
35	832	85.1	189	4	US-10-677-093-10	Sequence 10, Appl
36	832	85.1	189	5	US-10-820-467-10	Sequence 10, Appl
37	830	84.9	189	4	US-10-415-969-50	Sequence 50, Appl
38	830	84.9	189	4	US-10-676-705-4	Sequence 4, Appl
39	830	84.9	189	4	US-10-677-093-4	Sequence 4, Appl
40	830	84.9	189	5	US-10-820-467-4	Sequence 4, Appl
41	829	84.8	181	5	US-10-688-845-69	Sequence 69, Appl
42	828	84.7	189	3	US-09-881-050-27	Sequence 27, Appl
43	828	84.7	189	3	US-09-908-193-30	Sequence 30, Appl
44	828	84.7	189	4	US-10-676-705-1	Sequence 1, Appl
45	828	84.7	189	4	US-10-677-093-1	Sequence 1, Appl

#### ALIGNMENTS

RESULT 1  
US-09-881-050-21  
; Sequence 21, Application US/09881050  
; Publication No. US20020025304A1  
; GENERAL INFORMATION:  
; APPLICANT: CROZE, EDWARD M..  
; APPLICANT: FAULDS, DARYL  
; APPLICANT: WAGNER, T. CHARIS  
; TITLE OF INVENTION: NOVEL INTERFERON FOR THE TREATMENT OF MULTIPLE  
; TITLE OF INVENTION: SCLEROSIS  
; FILE REFERENCE: BERLX-88  
; CURRENT APPLICATION NUMBER: US/09/881,050  
; CURRENT FILING DATE: 2001-06-15  
; PRIOR APPLICATION NUMBER: 60/212,046  
; PRIOR FILING DATE: 2000-06-16  
; NUMBER OF SEQ ID NOS: 30  
; SOFTWARE: Patent Ver. 2.1  
; SEQ ID NO 21  
; LENGTH: 189  
; TYPE: PRT  
; ORGANISM: Unknown Organism  
; FEATURE:  
; ; OTHER INFORMATION: Description of Unknown Organism: IFNa1phas amino  
; ; OTHER INFORMATION: acid sequence  
US-09-881-050-21

Query Match 100.0%; Score 978; DB 3; Length 189;  
Best Local Similarity 100.0%; Pred. No. 9.9e-95;  
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy	1	MALPFVLMALVNLNCKSICSLGCDLPQTHSLNRRTLMTMAQGRISPFSCLDNRDFFG	60
Db	1	MALPFVLMALVNLNCKSICSLGCDLPQTHSLNRRTLMTMAQGRISPFSCLDNRDFFG	60
Oy	61	PPQEEFGNOFOKAQASVHEMTQQTFNLFTSTOSSATWDETLLDKFYTELQOQNDLE	120
Db	61	PPQEEFGNOFOKAQASVHEMTQQTFNLFTSTOSSATWDETLLDKFYTELQOQNDLE	120
Oy	121	ACMOQGVGDETPMNVDSILTVAKYFORITLVTEKKYSPCAMEVRAEIMRSFSLAN	180
Db	121	ACMOQGVGDETPMNVDSILTVAKYFORITLVTEKKYSPCAMEVRAEIMRSFSLAN	180
Oy	181	LOERLRKE 189	
Db	181	LOERLRKE 189	

RESULT 2  
US-10-676-705-5  
; Sequence 5, Application US/10676705

```
/ Publication No. US20040137581A1
/ GENERAL INFORMATION:
/ APPLICANT: Aguinado, Anna Marie
/ APPLICANT: Beyna, Amelia Joy
/ APPLICANT: Cho, Ho Sung
/ APPLICANT: Desjarlais, John Rudolph
/ APPLICANT: Marshall, Shannon Alicia
/ APPLICANT: Muchhal, Umesh
/ APPLICANT: Villegas, Michael Francis Aquino
/ APPLICANT: Zhukovsky, Eugene
/ TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES
/ FILE REFERENCE: A-71431-3
/ CURRENT APPLICATION NUMBER: US/10/676,705
/ CURRENT FILING DATE: 2003-09-30
/ PRIOR APPLICATION NUMBER: US 60/489,725
/ PRIOR FILING DATE: 2003-07-24
/ PRIOR APPLICATION NUMBER: US 60/477,246
/ PRIOR FILING DATE: 2003-06-10
/ PRIOR APPLICATION NUMBER: US 60/415,541
/ PRIOR FILING DATE: 2002-10-01
/ NUMBER OF SEQ ID NOS: 90
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 5
/ LENGTH: 189
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-676-705-5

Query Match      100.0%; Score 978; DB 4; Length 189;
Best Local Similarity 100.0%; Pred. No. 9.9e-95;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 MALPVLMLALVTVNCKSGISGCDLPQTHSLSNRRTIMIAQMGRIISPFSCLDKRDHFG 60
        |||
        1 MALPVLMLALVTVNCKSGISGCDLPQTHSLSNRRTIMIAQMGRIISPFSCLDKRDHFG 60
DB      61 FPOEFDPGNOFOKAQAI SVLHEMIQOTFNLFTSTQSSATWDETLLDKFYTELQOOLNDLE 120
        |||
        61 FPOEFDPGNOFOKAQAI SVLHEMIQOTFNLFTSTQSSATWDETLLDKFYTELQOOLNDLE 120
QY      121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
        |||
        121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
DB      121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
QY      181 LOERLRKE 189
        |||
        181 LOERLRKE 189
DB      181 LOERLRKE 189

RESULT 3
US-10-698-402-2
/ Sequence 2, Application US/10698402
/ Publication No. US20040142431A1
/ GENERAL INFORMATION:
/ APPLICANT: GENOCYSEE
/ TITLE OF INVENTION: New polynucleotides and polypeptides of the IFN alpha 5 gene
/ FILE REFERENCE: BIF 022984 EXTENSIONS
/ CURRENT APPLICATION NUMBER: US/10/698,402
/ CURRENT FILING DATE: 2003-11-03
/ PRIOR APPLICATION NUMBER: FR 0105919
/ PRIOR FILING DATE: 2001-05-03
/ NUMBER OF SEQ ID NOS: 12
/ SOFTWARE: PatentIn version 3.1
/ SEQ ID NO 2
/ LENGTH: 189
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-698-402-2

Query Match      100.0%; Score 978; DB 4; Length 189;
Best Local Similarity 100.0%; Pred. No. 9.9e-95;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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QY      1 MALPVLMLALVTVNCKSGISGCDLPQTHSLSNRRTIMIAQMGRIISPFSCLDKRDHFG 60
        |||
        1 MALPVLMLALVTVNCKSGISGCDLPQTHSLSNRRTIMIAQMGRIISPFSCLDKRDHFG 60
DB      61 FPOEFDPGNOFOKAQAI SVLHEMIQOTFNLFTSTQSSATWDETLLDKFYTELQOOLNDLE 120
        |||
        61 FPOEFDPGNOFOKAQAI SVLHEMIQOTFNLFTSTQSSATWDETLLDKFYTELQOOLNDLE 120
QY      121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
        |||
        121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
DB      121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
QY      181 LOERLRKE 189
        |||
        181 LOERLRKE 189
DB      181 LOERLRKE 189

RESULT 4
US-10-677-093-5
/ Sequence 5, Application US/10677093
/ Publication No. US20040175359A1
/ GENERAL INFORMATION:
/ APPLICANT: Desjarlais, John Rudolph
/ APPLICANT: Marshall, Shannon Alicia
/ APPLICANT: Mo, Yitrong
/ APPLICANT: Thomson, Adam Read
/ TITLE OF INVENTION: NOVEL PROTEINS WITH ANTI-VIRAL, ANTINEOPLASTIC, AND/OR
/ IMMUNOMODULATORY ACTIVITY
/ FILE REFERENCE: 33604/US/1
/ CURRENT APPLICATION NUMBER: US/10/677,093
/ CURRENT FILING DATE: 2003-09-30
/ PRIOR APPLICATION NUMBER: 60/425,851
/ PRIOR FILING DATE: 2002-11-12
/ NUMBER OF SEQ ID NOS: 54
/ SOFTWARE: PatentIn version 3.2
/ SEQ ID NO 5
/ LENGTH: 189
/ TYPE: PRT
/ ORGANISM: Homo sapiens
US-10-677-093-5

Query Match      100.0%; Score 978; DB 4; Length 189;
Best Local Similarity 100.0%; Pred. No. 9.9e-95;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 MALPVLMLALVTVNCKSGISGCDLPQTHSLSNRRTIMIAQMGRIISPFSCLDKRDHFG 60
        |||
        1 MALPVLMLALVTVNCKSGISGCDLPQTHSLSNRRTIMIAQMGRIISPFSCLDKRDHFG 60
DB      61 FPOEFDPGNOFOKAQAI SVLHEMIQOTFNLFTSTQSSATWDETLLDKFYTELQOOLNDLE 120
        |||
        61 FPOEFDPGNOFOKAQAI SVLHEMIQOTFNLFTSTQSSATWDETLLDKFYTELQOOLNDLE 120
QY      121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
        |||
        121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
DB      121 ACMQEVGEVDETPLMNVDSILTVRKYPFRITLYLTEKKYSPCAWEVVAEIMRSFSLSAN 180
QY      181 LOERLRKE 189
        |||
        181 LOERLRKE 189
DB      181 LOERLRKE 189

RESULT 5
US-10-820-467-5
/ Sequence 5, Application US/10820467
/ Publication No. US20050054053A1
/ GENERAL INFORMATION:
/ APPLICANT: Aguinado, Anna Marie
/ APPLICANT: Beyna, Amelia Joy
/ APPLICANT: Cho, Ho Sung
/ APPLICANT: Desjarlais, John Rudolph
/ APPLICANT: Marshall, Shannon Alicia
/ APPLICANT: Muchhal, Umesh
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; APPLICANT: Villagas, Michael Francis Aquino
; APPLICANT: Zhukovsky, Eugene
; APPLICANT: Quesenberry, Michael Stephen
; TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES
; FILE REFERENCE: A-71431-4
; CURRENT APPLICATION NUMBER: US/10/820,467
; CURRENT FILING DATE: 2004-03-30
; PRIOR APPLICATION NUMBER: US 60/477,246
; PRIOR FILING DATE: 2003-06-10
; PRIOR APPLICATION NUMBER: US 60/415,541
; PRIOR FILING DATE: 2002-10-01
; PRIOR APPLICATION NUMBER: US 60/489,725
; PRIOR FILING DATE: 2003-07-24
; PRIOR APPLICATION NUMBER: US 10/676,705
; PRIOR FILING DATE: 2003-09-30
; NUMBER OF SEQ ID NOS: 274
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 5
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-10-820-467-5

Query Match      100.0%; Score 978; DB 5; Length 189;
Best Local Similarity 100.0%; Pred. No. 9,9e-95;
Matches 189; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 MALPFLMALVNLNCKSGSLGCDLPQTHSLSNRRTLMIMAGRISSPSCLDKRRHDFG 60
DB      1 MALPFLMALVNLNCKSGSLGCDLPQTHSLSNRRTLMIMAGRISSPSCLDKRRHDFG 60

QY      61 PPOEFPDGNQFOKAQAISSVLEHMIQOTFNLSTQSSATWDETLLDKFYTELQQLNDLE 120
DB      61 PPOEFPDGNQFOKAQAISSVLEHMIQOTFNLSTQSSATWDETLLDKFYTELQQLNDLE 120

QY      121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSAN 180
DB      121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSAN 180

QY      181 LOERLRKKE 189
DB      181 LOERLRKKE 189

RESULT 6
US-09-977-034-11
; Sequence 11, Application US/09977034
; Patent No. US20020081664A1
; GENERAL INFORMATION:
; APPLICANT: Lo, Kin-Ming
; APPLICANT: Sun, Yaping
; APPLICANT: Gillies, Stephen D.
; TITLE OF INVENTION: Expression and Export of Interferon-Alpha Proteins as
; FILE REFERENCE: Lex-009
; CURRENT APPLICATION NUMBER: US/09/977,034
; CURRENT FILING DATE: 2001-10-11
; PRIOR APPLICATION NUMBER: US/09/575,503
; PRIOR FILING DATE: 2000-05-19
; PRIOR APPLICATION NUMBER: US 60/134,895
; PRIOR FILING DATE: 1999-05-19
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 11
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; OTHER INFORMATION: Human IFN alpha-5 protein
; US-09-977-034-11

Query Match      88.3%; Score 864; DB 3; Length 166;
Best Local Similarity 100.0%; Pred. No. 8.9e-83;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      24 CDLPQTHSLSNRRTLMIMAGRISSPSCLDKRRHDFGPOEFPDGNQFOKAQAISSVLEH 83
DB      1 CDLPQTHSLSNRRTLMIMAGRISSPSCLDKRRHDFGPOEFPDGNQFOKAQAISSVLEH 83

QY      84 IQOTFNLSTQSSATWDETLLDKFYTELQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143
DB      61 IQOTFNLSTQSSATWDETLLDKFYTELQQLNDLEACMMQEVGVEDTPLMNVDSILTV 120

QY      144 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANLOERLRKKE 189
DB      121 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANLOERLRKKE 166

RESULT 7
US-10-658-834A-187
; Sequence 187, Application US/10658834A
; Publication No. US20040132977A1
; GENERAL INFORMATION:
; APPLICANT: Gantier, Rene
; APPLICANT: Guyon, Thierry
; APPLICANT: Dittcanti, Lila
; APPLICANT: Vega, Manuel
; TITLE OF INVENTION: Rational Evolution of Cytokines for Higher Stability, Encoding Nu
; TITLE OF INVENTION: Acid
; FILE REFERENCE: 38751-922
; CURRENT APPLICATION NUMBER: US/10/658,834A
; CURRENT FILING DATE: 2003-09-08
; PRIOR APPLICATION NUMBER: 60/457,135
; PRIOR FILING DATE: 2003-03-21
; PRIOR APPLICATION NUMBER: 60/409,898
; PRIOR FILING DATE: 2002-09-09
; NUMBER OF SEQ ID NOS: 1306
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 187
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Homo sapiens
; PUBLICATION INFORMATION:
; DATABASE ACCESSION NUMBER: Genbank CAA26702
; DATABASE ENTRY DATE: 1995-03-30
; US-10-658-834A-187

Query Match      88.3%; Score 864; DB 4; Length 166;
Best Local Similarity 100.0%; Pred. No. 8.9e-83;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      24 CDLPQTHSLSNRRTLMIMAGRISSPSCLDKRRHDFGPOEFPDGNQFOKAQAISSVLEH 83
DB      1 CDLPQTHSLSNRRTLMIMAGRISSPSCLDKRRHDFGPOEFPDGNQFOKAQAISSVLEH 60

QY      84 IQOTFNLSTQSSATWDETLLDKFYTELQQLNDLEACMMQEVGVEDTPLMNVDSILTV 143
DB      61 IQOTFNLSTQSSATWDETLLDKFYTELQQLNDLEACMMQEVGVEDTPLMNVDSILTV 120

QY      144 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANLOERLRKKE 189
DB      121 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANLOERLRKKE 166

RESULT 8
US-10-714-817-34
; Sequence 34, Application US/10714817
; Publication No. US20040219131A1
; GENERAL INFORMATION:
; APPLICANT: Paten, Phillip A. et al.
; TITLE OF INVENTION: Interferon-Alpha Polypeptides and Conjugates
; FILE REFERENCE: 026948310
; CURRENT APPLICATION NUMBER: US/10/714,817
; CURRENT FILING DATE: 2003-11-17
; PRIOR APPLICATION NUMBER: US 60/502,560
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;; PRIOR FILING DATE: 2003-09-12  
;; PRIOR APPLICATION NUMBER: US 60/427,612  
;; PRIOR FILING DATE: 2002-11-18  
;; NUMBER OF SEQ ID NOS: 104  
;; SOFTWARE: FASTSeq for Windows Version 4.0  
;; SEQ ID NO 34  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
;; FEATURE:  
;; OTHER INFORMATION: mature huiFN alpha-5  
US-10-714-817-34

Query Match 88.3%; Score 864; DB 5; Length 166;  
Best Local Similarity 100.0%; Pred. No. 8.9e-83;  
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 24 CDLPQTHSLSNRRTIMIAQMGRIISPFSLCKDRHDFGPFQSEFDGNOFOKAQAISVLHEM 83  
DB 1 CDLPQTHSLSNRRTIMIAQMGRIISPFSLCKDRHDFGPFQSEFDGNOFOKAQAISVLHEM 60  
OY 84 IQQTNLFSTKSSATWDETLIDKRYTELKYOQLNDLEACMQQEVGEVETPLMNVDSILTV 143  
DB 61 IQQTNLFSTKSSATWDETLIDKRYTELKYOQLNDLEACMQQEVGEVETPLMNVDSILTV 120  
OY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 189  
DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 166

RESULT 9  
US-10-953-259-11  
;; Sequence 11, Application US/10953259  
;; Publication No. US20050042729A1

;; GENERAL INFORMATION:  
;; APPLICANT: Lo, Kin-Ming  
;; APPLICANT: Sun, Yaping  
;; APPLICANT: Gillies, Stephen D.  
;; TITLE OF INVENTION: Expression and Export of Interferon-Alpha Proteins as  
;; TITLE OF INVENTION: Fe Fusion Proteins  
;; FILE REFERENCE: LEX-009DVC1  
;; CURRENT APPLICATION NUMBER: US/10/953,259  
;; CURRENT FILING DATE: 2004-09-29  
;; PRIOR APPLICATION NUMBER: US 09/977,034  
;; PRIOR FILING DATE: 2001-10-11  
;; PRIOR APPLICATION NUMBER: US 09/575,503  
;; PRIOR FILING DATE: 2000-05-19  
;; PRIOR APPLICATION NUMBER: US 60/134,895  
;; PRIOR FILING DATE: 1999-05-19  
;; NUMBER OF SEQ ID NOS: 29  
;; SOFTWARE: PatentIn Ver. 2.0  
;; SEQ ID NO 11  
;; LENGTH: 166  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
;; FEATURE:  
;; OTHER INFORMATION: Human IFN alpha-5 protein  
US-10-953-259-11

Query Match 88.3%; Score 864; DB 5; Length 166;  
Best Local Similarity 100.0%; Pred. No. 8.9e-83;  
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 24 CDLPQTHSLSNRRTIMIAQMGRIISPFSLCKDRHDFGPFQSEFDGNOFOKAQAISVLHEM 83  
DB 1 CDLPQTHSLSNRRTIMIAQMGRIISPFSLCKDRHDFGPFQSEFDGNOFOKAQAISVLHEM 60  
OY 84 IQQTNLFSTKSSATWDETLIDKRYTELKYOQLNDLEACMQQEVGEVETPLMNVDSILTV 143  
DB 61 IQQTNLFSTKSSATWDETLIDKRYTELKYOQLNDLEACMQQEVGEVETPLMNVDSILTV 120  
OY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 189  
DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 166

DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 166

RESULT 10  
US-10-820-467-35  
;; Sequence 35, Application US/10820467  
;; Publication No. US20050054053A1

;; GENERAL INFORMATION:  
;; APPLICANT: Aguinaldo, Anna Marie  
;; APPLICANT: Beyna, Amelia Joy  
;; APPLICANT: Cho, Ho Sung  
;; APPLICANT: Desjarlais, John Rudolph  
;; APPLICANT: Marshall, Shannon Alicia  
;; APPLICANT: Muchal, Umesh  
;; APPLICANT: Villegas, Michael Francis Aquino  
;; APPLICANT: Zhukovsky, Eugene  
;; APPLICANT: Quesenberry, Michael Stephen  
;; TITLE OF INVENTION: INTERFERON VARIANTS WITH IMPROVED PROPERTIES  
;; FILE REFERENCE: A-71431-4  
;; CURRENT APPLICATION NUMBER: US/10/820,467  
;; CURRENT FILING DATE: 2004-03-30  
;; PRIOR APPLICATION NUMBER: US 60/477,246  
;; PRIOR FILING DATE: 2003-06-10  
;; PRIOR APPLICATION NUMBER: US 60/415,541  
;; PRIOR FILING DATE: 2002-10-01  
;; PRIOR APPLICATION NUMBER: US 60/489,725  
;; PRIOR FILING DATE: 2003-07-24  
;; PRIOR APPLICATION NUMBER: US 10/676,705  
;; PRIOR FILING DATE: 2003-09-30  
;; NUMBER OF SEQ ID NOS: 274  
;; SOFTWARE: PatentIn version 3.2  
;; SEQ ID NO 35  
;; LENGTH: 166  
;; TYPE: PRT  
;; ORGANISM: Homo sapiens  
US-10-820-467-35

Query Match 88.3%; Score 864; DB 5; Length 166;  
Best Local Similarity 100.0%; Pred. No. 8.9e-83;  
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 24 CDLPQTHSLSNRRTIMIAQMGRIISPFSLCKDRHDFGPFQSEFDGNOFOKAQAISVLHEM 83  
DB 1 CDLPQTHSLSNRRTIMIAQMGRIISPFSLCKDRHDFGPFQSEFDGNOFOKAQAISVLHEM 60  
OY 84 IQQTNLFSTKSSATWDETLIDKRYTELKYOQLNDLEACMQQEVGEVETPLMNVDSILTV 143  
DB 61 IQQTNLFSTKSSATWDETLIDKRYTELKYOQLNDLEACMQQEVGEVETPLMNVDSILTV 120  
OY 144 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 189  
DB 121 RKYFORITLYLTKKYSPCAMEVVRAEIMRSFSLSANLOERLRKE 166

RESULT 11  
US-10-415-969-62  
;; Sequence 62, Application US/10415969  
;; Publication No. US20040105841A1

;; GENERAL INFORMATION:  
;; APPLICANT: PBL BIOMEDICAL LABORATORIES  
;; TITLE OF INVENTION: INTERFERONS, USES AND COMPOSITIONS THEREO  
;; FILE REFERENCE: PBLI-PWO-012  
;; CURRENT APPLICATION NUMBER: US/10/415,969  
;; CURRENT FILING DATE: 2003-05-02  
;; PRIOR APPLICATION NUMBER: 60/245754  
;; PRIOR FILING DATE: 2000-11-03  
;; PRIOR APPLICATION NUMBER: 60/246234  
;; PRIOR FILING DATE: 2000-11-03  
;; NUMBER OF SEQ ID NOS: 86  
;; SOFTWARE: PatentIn version 3.1  
;; SEQ ID NO 62  
;; LENGTH: 189  
;; TYPE: PRT

ORGANISM: Homo sapiens  
US-10-415-969-62

Query Match 87.1%; Score 852; DB 4; Length 189;  
Best Local Similarity 86.8%; Pred. No. 1.9e-81;

Matches 164; Conservative 14; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPFLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
DB 1 MALSFSLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
QY 61 PPOEFPGNOFOKAQAIISVLHEMIQOTFNLSTKDSATWDETLDDKFTYELVQOANDLE 120  
DB 61 PPOEFPGNOFOKAQAIISVLHEMIQOTFNLSTKDSATWDETLDDKFTYELVQOANDLE 120  
QY 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLVLTEKKYSPCAWEVVRRAIMRSFSLSAN 180  
DB 121 ACVIQEVGVEETPLMNVDSILAVKRYFORITLVLTEKKYSPCAWEVVRRAIMRSFSLSKI 180  
QY 181 LOERLRKE 189  
DB 181 FOERLRKE 189

RESULT 12  
US-10-415-969-72

Sequence 72, Application US/10415969  
Publication No. US20040105841A1

GENERAL INFORMATION:

APPLICANT: PBL BIOMEDICAL LABORATORIES  
TITLE OF INVENTION: INTERFERONS, USES AND COMPOSITIONS THEREO

FILE REFERENCE: PBLT-PWO-012

CURRENT FILING DATE: 2003-05-02  
CURRENT APPLICATION NUMBER: 60/245754

PRIOR FILING DATE: 2000-11-03  
PRIOR APPLICATION NUMBER: 60/246234

PRIOR FILING DATE: 2000-11-03  
NUMBER OF SEQ ID NOS: 86

SOFTWARE: Patentin version 3.1  
SEQ ID NO 72

LENGTH: 189

TYPE: PRT

ORGANISM: Homo sapiens  
US-10-415-969-72

Query Match 87.1%; Score 852; DB 4; Length 189;  
Best Local Similarity 86.8%; Pred. No. 1.9e-81;  
Matches 164; Conservative 14; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPFLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
DB 1 MALSFSLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
QY 61 PPOEFPGNOFOKAQAIISVLHEMIQOTFNLSTKDSATWDETLDDKFTYELVQOANDLE 120  
DB 61 PPOEFPGNOFOKAQAIISVLHEMIQOTFNLSTKDSATWDETLDDKFTYELVQOANDLE 120  
QY 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLVLTEKKYSPCAWEVVRRAIMRSFSLSAN 180  
DB 121 ACVIQEVGVEETPLMNVDSILAVKRYFORITLVLTEKKYSPCAWEVVRRAIMRSFSLSKI 180  
QY 181 LOERLRKE 189  
DB 181 FOERLRKE 189

RESULT 13  
US-09-881-050-23

Sequence 23, Application US/09881050  
Publication No. US20020025304A1

GENERAL INFORMATION:  
APPLICANT: CROZE, EDWARD M.

APPLICANT: FAULDS, DARYL  
APPLICANT: WAGNER, T. CHARIS  
TITLE OF INVENTION: NOVEL INTERFERON FOR THE TREATMENT OF MULTIPLE  
TITLE OF INVENTION: SCLEROSIS

FILE REFERENCE: BERLX-88

CURRENT APPLICATION NUMBER: US/09/881,050  
CURRENT FILING DATE: 2001-06-15

PRIOR APPLICATION NUMBER: 60/212,046  
PRIOR FILING DATE: 2000-06-16

NUMBER OF SEQ ID NOS: 30  
SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 23  
LENGTH: 189

TYPE: PRT

ORGANISM: Unknown Organism

FEATURE:  
OTHER INFORMATION: Description of Unknown Organism: IFNalpha21 amino  
OTHER INFORMATION: acid sequence

US-09-881-050-23

Query Match 87.0%; Score 851; DB 3; Length 189;  
Best Local Similarity 86.2%; Pred. No. 2.5e-81;  
Matches 163; Conservative 15; Mismatches 11; Indels 0; Gaps 0;

QY 1 MALPFLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
DB 1 MALSFSLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
QY 61 PPOEFPGNOFOKAQAIISVLHEMIQOTFNLSTKDSATWDETLDDKFTYELVQOANDLE 120  
DB 61 PPOEFPGNOFOKAQAIISVLHEMIQOTFNLSTKDSATWDETLDDKFTYELVQOANDLE 120  
QY 121 ACMMQEVGVEDTPLMNVDSILTVRKYFORITLVLTEKKYSPCAWEVVRRAIMRSFSLSAN 180  
DB 121 ACVIQEVGVEETPLMNVDSILAVKRYFORITLVLTEKKYSPCAWEVVRRAIMRSFSLSKI 180  
QY 181 LOERLRKE 189  
DB 181 FOERLRKE 189

RESULT 14  
US-09-881-050-26

Sequence 26, Application US/09881050  
Publication No. US20020025304A1

GENERAL INFORMATION:

APPLICANT: CROZE, EDWARD M.

APPLICANT: FAULDS, DARYL  
TITLE OF INVENTION: NOVEL INTERFERON FOR THE TREATMENT OF MULTIPLE

FILE REFERENCE: BERLX-88

CURRENT APPLICATION NUMBER: US/09/881,050  
CURRENT FILING DATE: 2001-06-15

PRIOR APPLICATION NUMBER: 60/212,046  
PRIOR FILING DATE: 2000-06-16

NUMBER OF SEQ ID NOS: 30  
SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 26  
LENGTH: 189

TYPE: PRT

ORGANISM: Unknown Organism

FEATURE:  
OTHER INFORMATION: Description of Unknown Organism: IFNalpha14 amino  
OTHER INFORMATION: acid sequence

US-09-881-050-26

Query Match 87.0%; Score 851; DB 3; Length 189;  
Best Local Similarity 85.2%; Pred. No. 2.5e-81;  
Matches 161; Conservative 16; Mismatches 12; Indels 0; Gaps 0;

QY 1 MALPFLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60  
DB 1 MALSFSLMALVNLCKSISGLGCDLPOTHSLSNRRTLMIAOMGRISPFSCCLDRHDFG 60

```
Db      1 MALPPALMALVVLVLSCKSSCSIGCNLSQTHSIANNRRTLMMAQMRISPFSCCLKDRHDF 60
QY      61 FPOEEFDGNQFOKQAISVLEHMIQOTFNLFSTKDSATWDETLDKPYTELQOQNDLE 120
        |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      61 FPOEEFDGNQFOKQAISVLEHMIQOTFNLFSTKDSATWDETLDKPYTELQOQNDLE 120
QY      121 ACMQGEVGEDTPLMNVDLSILTRKYFORITLYLTEKXKSPCAMEVVRABEIMRSFSLSAN 180
        |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      121 ACVIGEVGEVETPLMNVDLSILAVKXKFORITLYLTEKXKSPCAMEVVRABEIMRSFSTN 180
QY      181 LOERLRKE 189
        |||||:
Db      181 LOKRLRRKD 189
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RESULT 15
US-09-919-497-73
; Sequence 73, Application US/09919497
; Patent No. US2002010662A1
; GENERAL INFORMATION:
; APPLICANT: Multier, George L.
; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
; FILE REFERENCE: B0801/7225
; CURRENT APPLICATION NUMBER: US/09/919,497
; CURRENT FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: US 60/221,735
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 100
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 73
; LENGTH: 189
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-919-497-73
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Query Match      87.0%; Score 851; DB 3; Length 189;
Best Local Similarity 86.2%; Pred. No. 2.5e-81;
Matches 163; Conservative 15; Mismatches 11; Indels 0; Gaps 0;
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QY      1 MALPPALMALVVLVLSCKSSCSIGCDLPQTHSISNRRTLMMAQMRISPFSCCLKDRHDF 60
        |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      1 MALSFSLMAVAVLSYKSCISIGCDLPQTHSISGNRRALILLAQMRISPFSCCLKDRHDF 60
QY      61 FPOEEFDGNQFOKQAISVLEHMIQOTFNLFSTKDSATWDETLDKPYTELQOQNDLE 120
        |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      61 FPOEEFDGNQFOKQAISVLEHMIQOTFNLFSTKDSATWDETLDKPYTELQOQNDLE 120
QY      121 ACMQGEVGEDTPLMNVDLSILTRKYFORITLYLTEKXKSPCAMEVVRABEIMRSFSLSAN 180
        |||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
Db      121 ACVIGEVGEVETPLMNVDLSILAVKXKFORITLYLTEKXKSPCAMEVVRABEIMRSFSLSKI 180
QY      181 LOERLRKE 189
        |||||:
Db      181 FOERLRKE 189
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Search completed: December 15, 2005, 13:06:19
Job time : 167 secs
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GenCore version 5.1.6  
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## OM protein - protein search, using sw model

Run on: December 15, 2005, 12:58:05 ; Search time 13 Seconds

(without alignments)  
97.913 Million cell updates/sec

Title: US-10-698-402-2

Perfect score: 978  
Sequence: 1 MALPFLVLMALVVLNCKSLC.....EIMRSFSLANLQERLRKE 189Scoring table: BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 51463 seqs, 6734768 residues

Total number of hits satisfying chosen parameters: 51463

Minimum DB seq length: 0  
Maximum DB seq length: 200000000Post-processing: Minimum Match 0%  
Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA New:  
1: /cgn2\_6/ptodata/2/pubpaa/US09\_NEW\_PUB pep:\*  
2: /cgn2\_6/ptodata/2/pubpaa/US06\_NEW\_PUB pep:\*  
3: /cgn2\_6/ptodata/2/pubpaa/US07\_NEW\_PUB pep:\*  
4: /cgn2\_6/ptodata/2/pubpaa/US08\_NEW\_PUB pep:\*  
5: /cgn2\_6/ptodata/2/pubpaa/PCR\_NEW\_PUB pep:\*  
6: /cgn2\_6/ptodata/2/pubpaa/US10\_NEW\_PUB pep:\*  
7: /cgn2\_6/ptodata/2/pubpaa/US11\_NEW\_PUB pep:\*  
8: /cgn2\_6/ptodata/2/pubpaa/US60\_NEW\_PUB pep:\*

Pred. No. is the number of results predicted by chance to have a  
score greater than or equal to the score of the result being printed,  
and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	864	88.3	166	US-11-132-722-49	Sequence 49, App1
2	809.5	82.8	415	US-11-029-003-12	Sequence 12, App1
3	809.5	82.8	423	US-11-029-003-10	Sequence 10, App1
4	809.5	82.8	430	US-11-029-003-22	Sequence 22, App1
5	809.5	82.8	669	US-11-053-100-39	Sequence 39, App1
6	801	81.9	167	US-11-132-722-58	Sequence 58, App1
7	775	79.2	166	US-11-132-722-57	Sequence 57, App1
8	765	78.2	166	US-11-132-722-43	Sequence 43, App1
9	762	77.9	166	US-11-132-722-36	Sequence 36, App1
10	761	77.8	166	US-11-132-722-41	Sequence 41, App1
11	757	77.4	166	US-11-132-722-54	Sequence 54, App1
12	757	77.4	166	US-11-132-722-54	Sequence 54, App1
13	755	77.2	166	US-11-132-722-44	Sequence 44, App1
14	754	77.1	166	US-11-132-722-3	Sequence 3, App1
15	754	77.1	166	US-11-132-722-48	Sequence 48, App1
16	752	76.9	166	US-11-132-722-6	Sequence 6, App1
17	750	76.7	166	US-11-132-722-37	Sequence 37, App1
18	750	76.7	166	US-11-132-722-40	Sequence 40, App1
19	749	76.6	166	US-11-132-722-35	Sequence 35, App1
20	749	76.6	166	US-11-132-722-42	Sequence 42, App1
21	748	76.5	166	US-11-132-722-4	Sequence 4, App1
22	748	76.5	166	US-11-132-722-32	Sequence 32, App1
23	746	76.3	166	US-11-132-722-50	Sequence 50, App1
24	743	76.0	166	US-11-132-722-17	Sequence 17, App1
25	743	76.0	166	US-11-132-722-56	Sequence 56, App1

26	742	75.9	166	US-11-132-722-8	Sequence 8, App1
27	742	75.9	166	US-11-132-722-33	Sequence 33, App1
28	742	75.9	166	US-11-132-722-53	Sequence 53, App1
29	741	75.8	166	US-11-132-722-39	Sequence 39, App1
30	740	75.7	166	US-11-132-722-9	Sequence 9, App1
31	740	75.7	166	US-11-132-722-16	Sequence 16, App1
32	740	75.7	166	US-11-132-722-34	Sequence 34, App1
33	739	75.6	166	US-11-132-722-45	Sequence 45, App1
34	738	75.5	166	US-11-132-722-2	Sequence 2, App1
35	737	75.4	166	US-11-132-722-1	Sequence 1, App1
36	737	75.4	166	US-11-132-722-12	Sequence 12, App1
37	736	75.3	166	US-11-132-722-30	Sequence 30, App1
38	736	75.3	166	US-11-132-722-31	Sequence 31, App1
39	735	75.2	166	US-11-132-722-15	Sequence 15, App1
40	735	75.2	166	US-11-132-722-38	Sequence 38, App1
41	734	75.1	166	US-11-132-722-11	Sequence 11, App1
42	732	74.8	166	US-11-132-722-14	Sequence 14, App1
43	732	74.8	166	US-11-132-722-20	Sequence 20, App1
44	731	74.7	166	US-11-132-722-10	Sequence 10, App1
45	731	74.7	166	US-11-132-722-29	Sequence 29, App1

## ALIGNMENTS

```
RESULT 1
US-11-132-722-49
; Sequence 49, Application US/1132722
; Publication No. US2005026465A1
; GENERAL INFORMATION:
; APPLICANT: Pattem, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 49
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
; US-11-132-722-49

Query Match      88.3%; Score 864; DB 7; Length 166;
Best Local Similarity 100.0%; Pred. No. 1.8e-82;
Matches 166; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      24 CDLPQTHSLSNRRTLMIMAGRIISPPSCIKDRHDFGFEEDFGNQFOKAQAIISVLEHM 83
      |||
Db      1 CDLPQTHSLSNRRTLMIMAGRIISPPSCIKDRHDFGFEEDFGNQFOKAQAIISVLEHM 60
      |||

QY      84 IQQTFNLFSTKDSASATWDETLTKFTLYQQLNDLEACMGEVGVDTPLMNVDSILTV 143
      |||
Db      61 IQQTFNLFSTKDSASATWDETLTKFTLYQQLNDLEACMGEVGVDTPLMNVDSILTV 120
      |||

Db      144 RKTFFORTLTVLTKKYSPCAMEVVRRAEIMRSFSLSANLQERLRKE 189
      |||
      121 RKTFFORTLTVLTKKYSPCAMEVVRRAEIMRSFSLSANLQERLRKE 166
      |||

RESULT 2
US-11-029-003-12
; Sequence 12, Application US/11029003
; Publication No. US20050260194A1
; GENERAL INFORMATION:
; APPLICANT: PETERS, ROBERT T.
; APPLICANT: MEZO, ADAM R.
; APPLICANT: WIERA, DANIEL S.
; APPLICANT: BITONTI, ALAN J.
; APPLICANT: STATTEL, JAMES
```

;; TITLE OF INVENTION: IMMUNOGLOBULIN CHIMERIC MONOMER-DIMER HYBRIDS  
;; FILE REFERENCE: 08945.0007-01000  
;; CURRENT APPLICATION NUMBER: US/11/029,003  
;; CURRENT FILING DATE: 2005-01-05  
;; PRIOR APPLICATION NUMBER: 60/539,207  
;; PRIOR FILING DATE: 2004-01-26  
;; PRIOR APPLICATION NUMBER: 60/487,964  
;; PRIOR FILING DATE: 2003-07-17  
;; PRIOR APPLICATION NUMBER: 60/469,600  
;; PRIOR FILING DATE: 2003-05-06  
;; NUMBER OF SEQ ID NOS: 91  
;; SOFTWARE: PatentIn Ver. 3.2  
;; SEQ ID NO 12  
;; LENGTH: 415  
;; TYPE: PRT  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
US-11-029-003-12

Query Match 82.8%; Score 809.5; DB 7; Length 415;  
Best Local Similarity 83.6%; Pred. No. 2.5e-76;  
Matches 158; Conservative 11; Mismatches 19; Indels 1; Gaps 1;

QY 1 MALPVLIMLVNCKSGICGLDLPOTHSLSNRRTIMTAQGRISPSFCLDRHDFG 60  
DB 1 MALPVLIMLVNCKSGICGLDLPOTHSLSNRRTIMTAQGRISPSFCLDRHDFG 60  
QY 61 PPOEFDGNOFOKQAI SVLHEMIQOTFNLSTKDSATWDETLDDKFTYELYOQLNDLE 120  
DB 61 PPOEFDGNOFOKQAI SVLHEMIQOTFNLSTKDSATWDETLDDKFTYELYOQLNDLE 119  
QY 121 ACMMQEVGEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVYRAEIMRSFSLSAN 180  
DB 120 ACVIGVGVTETPLMKEDSILA VRKYFORITLYLTKKYSFCAMEVYRAEIMRSFSLSTN 179  
QY 181 LOERLRKE 189  
DB 180 LOERLRKE 188

RESULT 3  
US-11-029-003-10  
;; Sequence 10, Application US/11029003  
;; Publication No. US20050260194A1  
;; GENERAL INFORMATION:  
;; APPLICANT: PETERS, ROBERT T.  
;; APPLICANT: MEZO, ADAM R.  
;; APPLICANT: RIVERA, DANIEL S.  
;; APPLICANT: BITONTI, ALAN J.  
;; APPLICANT: STATTEL, JAMES  
;; TITLE OF INVENTION: IMMUNOGLOBULIN CHIMERIC MONOMER-DIMER HYBRIDS  
;; FILE REFERENCE: 08945.0007-01000  
;; CURRENT APPLICATION NUMBER: US/11/029,003  
;; CURRENT FILING DATE: 2005-01-05  
;; PRIOR APPLICATION NUMBER: 60/539,207  
;; PRIOR FILING DATE: 2004-01-26  
;; PRIOR APPLICATION NUMBER: 60/487,964  
;; PRIOR FILING DATE: 2003-07-17  
;; PRIOR APPLICATION NUMBER: 60/469,600  
;; PRIOR FILING DATE: 2003-05-06  
;; NUMBER OF SEQ ID NOS: 91  
;; SOFTWARE: PatentIn Ver. 3.2  
;; SEQ ID NO 10  
;; LENGTH: 423  
;; TYPE: PRT  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
US-11-029-003-10

Query Match 82.8%; Score 809.5; DB 7; Length 423;  
Best Local Similarity 83.6%; Pred. No. 2.6e-76;  
Matches 158; Conservative 11; Mismatches 19; Indels 1; Gaps 1;

QY 1 MALPVLIMLVNCKSGICGLDLPOTHSLSNRRTIMTAQGRISPSFCLDRHDFG 60  
DB 1 MALPVLIMLVNCKSGICGLDLPOTHSLSNRRTIMTAQGRISPSFCLDRHDFG 60  
QY 61 PPOEFDGNOFOKQAI SVLHEMIQOTFNLSTKDSATWDETLDDKFTYELYOQLNDLE 120  
DB 61 PPOEFDGNOFOKQAI SVLHEMIQOTFNLSTKDSATWDETLDDKFTYELYOQLNDLE 119  
QY 121 ACMMQEVGEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVYRAEIMRSFSLSAN 180  
DB 120 ACVIGVGVTETPLMKEDSILA VRKYFORITLYLTKKYSFCAMEVYRAEIMRSFSLSTN 179  
QY 181 LOERLRKE 189  
DB 180 LOERLRKE 188

RESULT 4  
US-11-029-003-22  
;; Sequence 22, Application US/11029003  
;; Publication No. US20050260194A1  
;; GENERAL INFORMATION:  
;; APPLICANT: PETERS, ROBERT T.  
;; APPLICANT: MEZO, ADAM R.  
;; APPLICANT: RIVERA, DANIEL S.  
;; APPLICANT: BITONTI, ALAN J.  
;; APPLICANT: STATTEL, JAMES  
;; TITLE OF INVENTION: IMMUNOGLOBULIN CHIMERIC MONOMER-DIMER HYBRIDS  
;; FILE REFERENCE: 08945.0007-01000  
;; CURRENT APPLICATION NUMBER: US/11/029,003  
;; CURRENT FILING DATE: 2005-01-05  
;; PRIOR APPLICATION NUMBER: 60/539,207  
;; PRIOR FILING DATE: 2004-01-26  
;; PRIOR APPLICATION NUMBER: 60/487,964  
;; PRIOR FILING DATE: 2003-07-17  
;; PRIOR APPLICATION NUMBER: 60/469,600  
;; PRIOR FILING DATE: 2003-05-06  
;; NUMBER OF SEQ ID NOS: 91  
;; SOFTWARE: PatentIn Ver. 3.2  
;; SEQ ID NO 22  
;; LENGTH: 430  
;; TYPE: PRT  
;; ORGANISM: Artificial Sequence  
;; FEATURE:  
;; OTHER INFORMATION: Description of Artificial Sequence: Synthetic  
US-11-029-003-22

Query Match 82.8%; Score 809.5; DB 7; Length 430;  
Best Local Similarity 83.6%; Pred. No. 2.7e-76;  
Matches 158; Conservative 11; Mismatches 19; Indels 1; Gaps 1;

QY 1 MALPVLIMLVNCKSGICGLDLPOTHSLSNRRTIMTAQGRISPSFCLDRHDFG 60  
DB 1 MALPVLIMLVNCKSGICGLDLPOTHSLSNRRTIMTAQGRISPSFCLDRHDFG 60  
QY 61 PPOEFDGNOFOKQAI SVLHEMIQOTFNLSTKDSATWDETLDDKFTYELYOQLNDLE 120  
DB 61 PPOEFDGNOFOKQAI SVLHEMIQOTFNLSTKDSATWDETLDDKFTYELYOQLNDLE 119  
QY 121 ACMMQEVGEDTPLMNVDSILTVRKYFORITLYLTKKYSFCAMEVYRAEIMRSFSLSAN 180  
DB 120 ACVIGVGVTETPLMKEDSILA VRKYFORITLYLTKKYSFCAMEVYRAEIMRSFSLSTN 179  
QY 181 LOERLRKE 189  
DB 180 LOERLRKE 188



RESULT 5  
US-11-053-100-39  
; Sequence 39, Application US/11053100  
; Publication No. US2005025554A1  
; GENERAL INFORMATION:  
; APPLICANT: CHILKOTI, Ashutosh  
; TITLE OF INVENTION: FUSION PEPTIDES ISOLATABLE BY PHASE TRANSITION  
; FILE REFERENCE: 4176-101 CIP  
; CURRENT APPLICATION NUMBER: US/11/053,100  
; CURRENT FILING DATE: 2005-02-08  
; PRIOR APPLICATION NUMBER: US 09/812,382  
; PRIOR FILING DATE: 2001-03-20  
; PRIOR APPLICATION NUMBER: US 60/190,659  
; PRIOR FILING DATE: 2000-03-20  
; NUMBER OF SEQ ID NOS: 58  
; SOFTWARE: PatentIn version 3.3  
; SEQ ID NO 39  
; LENGTH: 669  
; TYPE: PRT  
; ORGANISM: Artificial  
; FEATURE:  
; OTHER INFORMATION: Synthetic Construct  
; NAME/KEY: MISC FEATURE  
; LOCATION: (1)-(669)  
; OTHER INFORMATION: PET32a-SD11-ELP1-90-throm-Interferon Alpha 2B  
US-11-053-100-39

Query Match 82.8%; Score 809.5; DB 7; Length 669;  
Best Local Similarity 83.6%; Pred. No. 4.8e-76;  
Matches 158; Conservative 11; Mismatches 19; Indels 1; Gaps 1;

QY 1 MALPFLVLMALVINCSCISGLGCDLPQTHSLSNRRTLMIAQGRISPSFCLDRHDFG 60  
DB 482 MALPFLVLMALVINCSCISGLGCDLPQTHSLSNRRTLMIAQGRISPSFCLDRHDFG 541  
QY 61 PPOEFPDGNQFOKAQISVHHEMIQOTFNLFTSTDSATWETLLDKFYTELQOULNDLE 120  
DB 542 PPOEFPDGNQFOKAQISVHHEMIQOTFNLFTSTDSATWETLLDKFYTELQOULNDLE 600  
QY 121 ACNMQEVEGVEDTPIPLMNVDSILTVRKYPORITLYLTEKYSPCAMEVYRAEIMRSFSLSAN 180  
DB 601 ACNMQEVEGVEDTPIPLMNVDSILTVRKYPORITLYLTEKYSPCAMEVYRAEIMRSFSLSAN 660  
QY 181 LOERLRKE 189  
DB 661 LOERLRKE 669

RESULT 6  
US-11-132-722-58  
; Sequence 58, Application US/11132722  
; Publication No. US20050266465A1  
; GENERAL INFORMATION:  
; APPLICANT: Patten, Phillip A., et al.  
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
; FILE REFERENCE: 0280.310US  
; CURRENT APPLICATION NUMBER: US/11/132,722  
; CURRENT FILING DATE: 2005-05-18  
; PRIOR APPLICATION NUMBER: US 60/572,504  
; PRIOR FILING DATE: 2004-05-19  
; NUMBER OF SEQ ID NOS: 90  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 167  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: Synthetic Construct IFN-alpha Conl  
US-11-132-722-58

Query Match 81.9%; Score 801; DB 7; Length 167;

Best Local Similarity 91.0%; Pred. No. 5.8e-76;  
Matches 151; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

QY 24 CDLPQTHSLSNRRTLMIAQGRISPSFCLDRHDFGPOEFPDGNQFOKAQISVHHEMI 83  
DB 2 CDLPQTHSLSNRRTLMIAQGRISPSFCLDRHDFGPOEFPDGNQFOKAQISVHHEMI 61  
QY 84 IOOTFNLFTSKDSATWETLLDKFYTELQOULNDLEACMQEVEGVEDTPIPLMNVDSILTV 143  
DB 62 IOOTFNLFTSKDSATWETLLDKFYTELQOULNDLEACMQEVEGVEDTPIPLMNVDSILTV 121  
QY 144 RKYFORITLYLTEKYSPCAMEVYRAEIMRSFSLSANLOERLRKE 189  
DB 122 RKYFORITLYLTEKYSPCAMEVYRAEIMRSFSLSANLOERLRKE 167

RESULT 7  
US-11-132-722-57  
; Sequence 57, Application US/11132722  
; Publication No. US20050266465A1  
; GENERAL INFORMATION:  
; APPLICANT: Patten, Phillip A., et al.  
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
; FILE REFERENCE: 0280.310US  
; CURRENT APPLICATION NUMBER: US/11/132,722  
; CURRENT FILING DATE: 2005-05-18  
; PRIOR APPLICATION NUMBER: US 60/572,504  
; PRIOR FILING DATE: 2004-05-19  
; NUMBER OF SEQ ID NOS: 90  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 57  
; LENGTH: 166  
; TYPE: PRT  
; ORGANISM: homo sapiens  
US-11-132-722-57

Query Match 79.2%; Score 775; DB 7; Length 166;  
Best Local Similarity 88.6%; Pred. No. 2.8e-73;  
Matches 147; Conservative 11; Mismatches 8; Indels 0; Gaps 0;

QY 24 CDLPQTHSLSNRRTLMIAQGRISPSFCLDRHDFGPOEFPDGNQFOKAQISVHHEMI 83  
DB 1 CDLPQTHSLSNRRTLMIAQGRISPSFCLDRHDFGPOEFPDGNQFOKAQISVHHEMI 60  
QY 84 IOOTFNLFTSKDSATWETLLDKFYTELQOULNDLEACMQEVEGVEDTPIPLMNVDSILTV 143  
DB 61 IOOTFNLFTSKDSATWETLLDKFYTELQOULNDLEACMQEVEGVEDTPIPLMNVDSILTV 120  
QY 144 RKYFORITLYLTEKYSPCAMEVYRAEIMRSFSLSANLOERLRKE 189  
DB 121 RKYFORITLYLTEKYSPCAMEVYRAEIMRSFSLSANLOERLRKE 166

RESULT 8  
US-11-132-722-43  
; Sequence 43, Application US/11132722  
; Publication No. US20050266465A1  
; GENERAL INFORMATION:  
; APPLICANT: Patten, Phillip A., et al.  
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND  
; FILE REFERENCE: 0280.310US  
; CURRENT APPLICATION NUMBER: US/11/132,722  
; CURRENT FILING DATE: 2005-05-18  
; PRIOR APPLICATION NUMBER: US 60/572,504  
; PRIOR FILING DATE: 2004-05-19  
; NUMBER OF SEQ ID NOS: 90  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 43  
; LENGTH: 166  
; TYPE: PRT  
; ORGANISM: Artificial Sequence

```
; FEATURE:
; OTHER INFORMATION: Synthetic Construct 25bp128
US-11-132-722-43

Query Match      78.2%; Score 765; DB 7; Length 166;
Best Local Similarity 88.0%; Pred. No. 3e-72;
Matches 146; Conservative 8; Mismatches 12; Indels 0; Gaps 0;

OY 24 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 83
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 1 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 60

OY 84 IQOTFNLSTKDSASATWDETLIDKRYTELKYOQLNDLEACMQQVGVEDTPLMNVDSILTV 143
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 61 IQOTFNLSTKDSASAMDETLLEKRYIELFOQNNLLEACVIOEVGEETALMNVDSILAV 120

OY 144 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 189
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 121 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 166

RESULT 9
US-11-132-722-36
; Sequence 36, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 36
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Construct 25bp108
US-11-132-722-36

Query Match      77.9%; Score 762; DB 7; Length 166;
Best Local Similarity 86.7%; Pred. No. 6.1e-72;
Matches 144; Conservative 12; Mismatches 10; Indels 0; Gaps 0;

OY 24 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 83
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 1 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 60

OY 84 IQOTFNLSTKDSASATWDETLIDKRYTELKYOQLNDLEACMQQVGVEDTPLMNVDSILTV 143
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 61 IQOTFNLSTKDSASAMDETLLEKRYIELFOQNNLLEACVIOEVGEETALMNVDSILAV 120

OY 144 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 189
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 121 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 166

RESULT 10
US-11-132-722-41
; Sequence 41, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
```

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; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 41
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Construct 25bp126
US-11-132-722-41

Query Match      77.8%; Score 761; DB 7; Length 166;
Best Local Similarity 87.3%; Pred. No. 7.8e-72;
Matches 145; Conservative 9; Mismatches 12; Indels 0; Gaps 0;

OY 24 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 83
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 1 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 60

OY 84 IQOTFNLSTKDSASATWDETLIDKRYTELKYOQLNDLEACMQQVGVEDTPLMNVDSILTV 143
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 61 IQOTFNLSTKDSASAMDETLLEKRYIELKYOQLNDLEACVIOEVGEETALMNVDSILAV 120

OY 144 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 189
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 121 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 166

RESULT 11
US-11-132-722-5
; Sequence 5, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 5
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic construct 14bp110
US-11-132-722-5

Query Match      77.4%; Score 757; DB 7; Length 166;
Best Local Similarity 86.1%; Pred. No. 2e-71;
Matches 143; Conservative 11; Mismatches 12; Indels 0; Gaps 0;

OY 24 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 83
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 1 CDLPOTHSLSNRRTIMAMQGRISPFSCLDKRDHDFGPEEFDPGNOFOKAQAIISVLHEM 60

OY 84 IQOTFNLSTKDSASATWDETLIDKRYTELKYOQLNDLEACMQQVGVEDTPLMNVDSILTV 143
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 61 IQOTFNLSTKDSASAMDETLLEKRYIELFOQNNLLEACVIOEVGEETALMNVDSILAV 120

OY 144 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 189
    |||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:|||||:
DB 121 RKYFORITLYLTEKKYSPCAMEVVRRAEIMRSFSTINQESLRSKE 166

RESULT 12
US-11-132-722-54
; Sequence 54, Application US/11132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
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; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; PRIOR FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 54
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-54

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Query Match          77.4%; Score 757; DB 7; Length 166;
Best Local Similarity 86.1%; Pred. No. 2e-71;
Matches 143; Conservative 13; Mismatches 10; Indels 0; Gaps 0;

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QY 24 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 83
DB 1 CNIQSOTHSLNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 60
QY 84 IQOTFNLFSFKDSATWDETLIDKFEYTELYQQLNDLEACMQQEVGVEDTFLMNVDSILTV 143
DB 61 IQOTFNLFSFKDSAAWDETLIDKFEYTELYEQQNDLEACVYQEVGVETFLMNVDSILTV 120
QY 144 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANIOERLRKE 189
DB 121 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSTNLQKRLRKD 166

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RESULT 13
US-11-132-722-44
; Sequence 44, Application US/11/132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 44
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic Construct 25Epi29
US-11-132-722-44

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```

Query Match          77.2%; Score 755; DB 7; Length 166;
Best Local Similarity 85.5%; Pred. No. 3.2e-71;
Matches 142; Conservative 13; Mismatches 11; Indels 0; Gaps 0;
QY 24 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 83
DB 1 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 60
QY 84 IQOTFNLFSFKDSATWDETLIDKFEYTELYQQLNDLEACMQQEVGVEDTFLMNVDSILTV 143
DB 61 IQOTFNLFSFKDSAAWDETLIDKFEYTELYEQQNDLEACVYQEVGVETFLMNVDSILTV 120
QY 144 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANIOERLRKE 189
DB 121 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSTNLQDLSRKE 166

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RESULT 14
US-11-132-722-3
; Sequence 3, Application US/11/132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 166
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Synthetic construct 14Epi08
US-11-132-722-3

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```

Query Match          77.1%; Score 754; DB 7; Length 166;
Best Local Similarity 86.1%; Pred. No. 4.1e-71;
Matches 143; Conservative 10; Mismatches 13; Indels 0; Gaps 0;

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```

QY 24 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 83
DB 1 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 60
QY 84 IQOTFNLFSFKDSATWDETLIDKFEYTELYQQLNDLEACMQQEVGVEDTFLMNVDSILTV 143
DB 61 IQOTFNLFSFKDSAAWDETLIDKFEYTELYEQQNDLEACVYQEVGVETFLMNVDSILTV 120
QY 144 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSLSANIOERLRKE 189
DB 121 RKYFORITLYLTKKYSPCAMEVVRRAEIMRSFSTNLQKRLRKD 166

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RESULT 15
US-11-132-722-48
; Sequence 48, Application US/11/132722
; Publication No. US20050266465A1
; GENERAL INFORMATION:
; APPLICANT: Patten, Phillip A., et al.
; TITLE OF INVENTION: INTERFERON-ALPHA POLYPEPTIDES AND
; FILE REFERENCE: 0280.310US
; CURRENT APPLICATION NUMBER: US/11/132,722
; CURRENT FILING DATE: 2005-05-18
; PRIOR APPLICATION NUMBER: US 60/572,504
; PRIOR FILING DATE: 2004-05-19
; NUMBER OF SEQ ID NOS: 90
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 48
; LENGTH: 166
; TYPE: PRT
; ORGANISM: homo sapiens
US-11-132-722-48

```

```

Query Match          77.1%; Score 754; DB 7; Length 166;
Best Local Similarity 84.9%; Pred. No. 4.1e-71;
Matches 141; Conservative 15; Mismatches 10; Indels 0; Gaps 0;
QY 24 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 83
DB 1 CDLPQTHSLSNRRITLMAQMGRISSPSCIKDRHDFGFPQEEPDGNOFOKAQAIISVLAHEM 60
QY 84 IQOTFNLFSFKDSATWDETLIDKFEYTELYQQLNDLEACMQQEVGVEDTFLMNVDSILTV 143
DB 61 IQOTFNLFSFKDSAAWDETLIDKFEYTELYEQQNDLEACVYQEVGVETFLMNVDSILTV 120

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Oy      144 RYFORITLYTEKYSPCAMEVVRRAEINRFSLSANQERLRKE 189
         |||||
Db      121 RYFORITLYTEKYSPCAMEVVRRAEINRFSLSANQERLRKE 166
         |||||

```

Search completed: December 15, 2005, 13:06:38  
Job time : 14 secs